

Table 1: Open Problems

Id	Basis Proposal	Min.Lex.	GAP
PB[6,001]	(A)	[111111,111111,111111,111111,111211,112315]	(6,413)
	$xy^2 \approx zaz$	[111111,111111,111111,111112,111211,112315]	(6,414)
	(B)	[111111,111111,111111,111112,112143,111112]	(6,2416)
	$x^3 \approx yzy$	[111111,111111,111111,111112,112143,111122]	(6,2417)
	$x^3 \approx yzab$ $xyz \approx yxz$		
PB[6,002]	(Known basis)	[111111,111111,111111,111111,111211,113116]	(6,989)
	$x^2 \approx x^3$	[111111,111111,111111,111111,111211,113136]	(6,990)
	$xy^2 \approx yx^2$	[111111,111111,111111,111111,111211,113316]	(6,991)
	$xyz \approx xy^2z$	[111111,111111,111111,111111,111211,113336]	(6,992)
		[111111,111111,111111,111111,111455,112455]	(6,2909)
		[111111,111111,111111,111111,122255,122355]	(6,2917)
		[111111,111111,111111,111112,113151,111211]	(6,1052)
		[111111,111111,111111,111112,113153,111211]	(6,1053)
		[111111,111111,111111,111112,113155,113155]	(6,2930)
		[111111,111111,111111,111112,113155,113255]	(6,2931)
		[111111,111111,111111,111112,113353,111211]	(6,1054)
		[111111,111111,111111,111112,113355,113355]	(6,2932)
		[111111,111111,123333,123333,123333,123343]	(6,3059)
		[111111,111111,123333,123333,123334,123343]	(6,3061)
	Note: Website W(6,1)		
PB[6,003]	(A)	[111111,111111,111111,111111,111212,112325]	(6,871)
	$xyx \approx xy^2$	[111111,111111,111111,111112,111212,112325]	(6,872)
	$xyz \approx yxz$	[111111,111111,111111,111122,111121,112234]	(6,2538)
	$x^4 \approx yzab$	[111111,111111,111111,111122,111122,112234]	(6,2539)
	(B)		
$xyx \approx xy^2$			
$xyz \approx yxz$			
$x^4 \approx yzab$			
PB[6,004]	(A)	[111111,111111,111111,111112,111113,112141]	(6,42)
	$x^2 \approx y^2z$		
	(B)		
$x^2 \approx y^2z$			
$xyz \approx zyx$			

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Id	Basis Proposal	Min.Lex	GAP
PB[6,005]	(A)	[111111,111111,111111,111112,111113,112142]	(6,338)
	$xy^2 \approx z^2a$	[111111,111111,111111,111112,111123,112141]	(6,481)
	(B)	[111111,111111,111111,111112,111123,112142]	(6,1485)
	$x^3 \approx y^2z$ $x^3 \approx yzab$ $xyz \approx zyx$		
PB[6,006]	(A)	[111111,111111,111111,111112,111124,112245]	(6,2579)
	$xy^2 \approx yxy$	[111111,111111,111112,111112,111123,112135]	(6,2579)
	$xyz \approx xzy$	[111111,111111,111112,111211,111123,112235]	(6,5117)
	$x^2y^2 \approx x^3y$	[111111,111111,111112,111212,111123,112135]	(6,5117)
PB[6,007]	(A)	[111111,111111,111111,111112,111151,112214]	(6,2800)
	$xy^2 \approx x^2y$	[111111,111111,111112,111112,111151,111214]	(6,2800)
	$xyz \approx xzy$	[111111,111111,111112,111211,111151,112213]	(6,5346)
	$xy^2 \approx y^2x$	[111111,111111,111112,111212,111151,112113]	(6,5346)
		[111111,111111,111112,111441,111441,112123]	(6,5465)
		[111111,111111,111112,111441,111442,112113]	(6,5465)
		[111111,122222,122222,122222,122223,122335]	(6,2844)
		[111111,122222,122222,122223,122223,122235]	(6,2844)
		[111111,122222,122222,122223,122232,122334]	(6,5365)
	[111111,122222,122222,122223,122233,122324]	(6,5365)	
PB[6,008]	(A)	[111111,111111,111111,111112,112114,111113]	(6,413)
	$xyx \approx z^2a$	[111111,111111,111111,111112,112114,111123]	(6,414)
		[111111,111111,111111,111112,112124,111113]	(6,2416)
		[111111,111111,111111,111112,112124,111123]	(6,2417)
PB[6,009]	(A)	[111111,111111,111111,111112,112143,112141]	(6,583)
	$x^3 \approx yz^2$ $x^2y \approx yxy$	[111111,111111,111111,111112,112143,112142]	(6,2494)

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Id	Basis Proposal	Min.Lex	GAP
PB[6,010]	(A) $xyx \approx xy^2$ $xyz \approx yxz$ $x^3y \approx x^4y$ (B) $xyx \approx xy^2$ $xyz \approx yxz$ $xyza \approx x^2yza$ $xyx \approx xy^2$ $xyz \approx yxz$ $xyza \approx x^2yza$	$[111111,111111,111111,111112,113151,111214]$ $[111111,111111,111111,111112,113153,111214]$ $[111111,111111,123333,123333,123334,123345]$	(6,2797) (6,2798) (6,5480)
PB[6,011]	(A) $xyx \approx xy^2$ $xy^2 \approx yxy$ $xyz \approx x^2yz$ (B) $xyx \approx xy^2$ $xyx \approx yx^2$ $xyz \approx x^2yz$	$[111111,111111,111111,111112,121451,111113]$ $[111111,111111,111111,111112,121452,111113]$	(6,2638) (6,2639)
PB[6,012]	(A) $x^2y \approx x^3y$ $xyx \approx yxy$ $xy^2 \approx xy^3$ $x^2y^2 \approx xyx$ $xyxz \approx x^2yz$ (B) $xyx \approx yxy$ $xyz \approx xy^2z$	$[111111,111111,111111,111114,111121,113116]$ $[111111,111111,111111,111114,111121,113136]$ $[111111,111111,111111,111114,111124,113116]$ $[111111,111111,111111,111114,111124,113136]$ $[111111,111111,111111,111211,112115,113116]$ $[111111,111111,111111,111211,112215,113316]$ $[111111,111111,111111,112114,112124,113116]$ $[111111,111111,111333,121444,121444,121445]$	(6,2604) (6,2605) (6,2605) (6,2609) (6,2653) (6,2654) (6,2654) (6,5858)

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Id	Basis Proposal	Min.Lex	GAP
PB[6,013]	(A)	[111111,111111,111111,111114,111121,113416]	(6,2606)
	$x^2y \approx x^3y$	[111111,111111,111111,111114,111121,113436]	(6,2607)
	$xyz \approx yxz$	[111111,111111,111111,111114,111124,113446]	(6,2610)
	$x^2yx \approx xyx$	[111111,111111,111113,111113,111121,113416]	(6,2667)
	$xy^2x \approx x^2y^2$	[111111,111111,111113,111113,111123,113436]	(6,2669)
	(B)	[111111,111111,111113,111113,111123,113446]	(6,2670)
	$x^2y \approx x^3y$	[111111,111111,111333,123444,123444,123445]	(6,5859)
	$xyx \approx x^2yx$	[111111,111222,111222,123444,123444,123445]	(6,5861)
	$xyz \approx yxz$ $x^2yzaz \approx xaz^2yx$		
PB[6,014]	(Known basis)	[111111,111111,111111,111114,112111,111116]	(6,989)
	$x^2 \approx x^3$	[111111,111111,111111,111114,112114,111116]	(6,991)
	$x^2y \approx y^2x$	[111111,111111,111111,111144,111155,112155]	(6,2930)
	$xyz \approx xy^2z$	[111111,111111,111112,111141,111151,111141]	(6,990)
		[111111,111111,111112,111141,111151,112111]	(6,1052)
		[111111,111111,111112,111141,111151,112141]	(6,1053)
		[111111,111111,111112,111144,111155,111155]	(6,2909)
		[111111,111111,111112,111144,111155,112155]	(6,2931)
		[111111,111111,111113,111113,111213,111116]	(6,992)
		[111111,111111,111113,111123,111213,111116]	(6,1054)
		[111111,111111,111133,111133,111155,111255]	(6,2932)
		[111111,111122,111122,111123,111155,111155]	(6,2917)
		[111111,112222,113333,113333,113333,113343]	(6,3059)
		[111111,112222,113333,113333,113334,113343] Note: Website W(6,2)	(6,3061)
PB[6,015]	(A)	[111111,111111,111111,111114,112111,111416]	(6,1039)
	$x^2 \approx x^3$	[111111,111111,111111,111114,112114,111446]	(6,1044)
	$xy^2 \approx yxy$	[111111,111111,111111,111144,111455,112455]	(6,2938)
	$xyz \approx xzy$	[111111,111111,111112,111141,111454,111141]	(6,1044)
	(B)	[111111,111111,111112,111144,111455,111455]	(6,2938)
	$x^2 \approx x^3$	[111111,111111,111113,111113,111213,113336]	(6,1101)
	$xyz \approx xzy$	[111111,111122,111122,111122,122255,122355]	(6,3022)
	$xyz \approx yxz$	[111111,111122,111122,111123,122255,122255] [111111,112222,123333,123333,123333,123343]	(6,3022) (6,3064)

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Id	Basis Proposal	Min.Lex	GAP
PB[6,016]	(A)	[111111,111111,111111,111114,112111,121156]	(6,1040)
	$x^2 \approx x^3$	[111111,111111,111111,111114,112111,122156]	(6,1042)
	$xyx \approx yxy$	[111111,111111,111112,111141,123151,111141]	(6,1098)
	$x^2y^2 \approx xyx$	[111111,111111,111112,111141,123152,111141]	(6,1099)
	$xyz^2 \approx xyzy$		
	(B)		
	$x^2 \approx x^3$		
	$xyx \approx yxy$		
	$xyx \approx x^2yx$		
	$xyza \approx xy^2za$		
PB[6,017]	(A)	[111111,111111,111111,111114,112111,121456]	(6,1041)
	$x^2 \approx x^3$	[111111,111111,111111,111114,112111,122456]	(6,1043)
	$xyx \approx yx^2$	[111111,111111,111111,111114,112114,121456]	(6,1045)
	$xy^2x \approx x^2y^2$	[111111,111111,111111,111114,112114,122456]	(6,1046)
	$xyzx \approx xzyx$	[111111,111111,111111,111124,112111,121456]	(6,1062)
	(B)	[111111,111111,111111,111124,112111,122456]	(6,1063)
	$x^2 \approx x^3$	[111111,111111,111112,111141,123454,111141]	(6,1100)
	$xyx \approx yx^2$	[111111,111111,111112,112141,123454,112141]	(6,1134)
	$x^2y^2 \approx xy^2x$	[111111,111111,111113,111113,111213,123356]	(6,1102)
	$xyza \approx yxza$		

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Id	Basis Proposal	Min.Lex	GAP
PB[6,018]	(A)	[111111,111111,111111,111114,112121,111416]	(6,2612)
	$x^3 \approx x^4$	[111111,111111,111111,111114,112124,111446]	(6,2614)
	$xy^2 \approx yxy$	[111111,111111,111112,111141,111451,111112]	(6,2612)
	$xyz \approx xzy$	[111111,111111,111112,111141,111454,111142]	(6,2614)
	(B)	[111111,111111,111113,111113,111221,113316]	(6,2671)
	$x^2y \approx x^3y$	[111111,111111,111113,111113,111223,113336]	(6,2672)
	$xyz \approx xzy$	[111111,111111,111113,111123,111121,113316]	(6,2671)
	$xyz \approx yxz$	[111111,111111,111113,111123,111123,113336]	(6,2672)
		[111111,111111,111113,111211,111221,113116]	(6,5158)
		[111111,111111,111113,111211,111223,113136]	(6,5159)
		[111111,111111,111113,111213,111221,113316]	(6,5159)
		[111111,111111,111113,111213,111223,113336]	(6,5161)
		[111111,111111,111133,111211,113155,113255]	(6,5421)
		[111111,111111,111133,111212,113155,113155]	(6,5421)
		[111111,112222,123333,123333,123333,123344]	(6,5483)
		[111111,112222,123333,123333,123334,123334]	(6,5483)
	[111111,112222,123333,123333,123343,123344]	(6,9396)	
PB[6,019]	(A)	[111111,111111,111111,111122,111133,112141]	(6,583)
	$x^3 \approx y^2z$	[111111,111111,111111,111122,111133,112142]	(6,2494)
	$xyx \approx xy^2$		
	(B)		
	$x^3 \approx y^2z$		
	$x^3 \approx yzab$		
	$xyx \approx xy^2$		
PB[6,020]	(A)	[111111,111111,111111,111122,111133,112244]	(6,2558)
	$xy^2 \approx x^2y$		
	$xyz \approx xzy$		
	$x^4 \approx yzab$		
	(B)		
	$x^2y \approx xy^2$		
	$xyz \approx xzy$		
	$x^4 \approx yzab$		

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Id	Basis Proposal	Min.Lex	GAP
PB[6,021]	(A)	[111111,111111,111111,111124,112124,121456]	(6,2636)
	$x^2y \approx x^3y$	[111111,111111,111111,111124,112124,122456]	(6,2637)
	$xyx \approx yx^2$	[111111,111111,111123,111123,111223,123356]	(6,2705)
	$xyzx \approx xzyx$		
	(B)		
	$x^2y \approx x^3y$		
PB[6,022]	(A)	[111111,111111,111111,111144,113456,133456]	(6,3339)
	$x^2 \approx x^3$	[111111,111122,111122,111122,122456,124456]	(6,3889)
	$xyx \approx yx^2$	[111111,111123,111123,111123,123256,123356]	(6,3930)
	$xyzx \approx xzyx$	[111111,111123,111123,111123,123356,123256]	(6,3932)
	(B)		
	$x^2 \approx x^3$		
PB[6,023]	(A)	[111111,111111,111111,111211,113151,666666]	(6,5522)
	$x^2y \approx x^3y$	[111111,111111,111111,111211,113155,113166]	(6,5524)
	$xyx \approx xy^2$	[111111,111111,111111,111211,113351,666666]	(6,5528)
	$xy^2 \approx xy^3$	[111111,111111,111111,111211,113355,113366]	(6,5530)
	$xyzx \approx xzyx$	[111111,111111,112111,444444,444444,444456]	(6,9541)
	(B)	[111111,111111,112111,444444,444444,445456]	(6,9542)
	$xyx \approx xy^2$	[111111,111111,123133,444444,123133,123135]	(6,9642)
	$xyz \approx xyxz$	[111111,111111,123333,123333,123343,126666]	(6,9639)
	$xyzx \approx xzyx$		

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Id	Basis Proposal	Min.Lex	GAP
PB[6,024]	<p>(A)</p> $x^2y \approx x^3y$ $xyz \approx yxz$ $x^2y^2 \approx xy^2$ <p>(B)</p> $xyz \approx yxz$ $xyz \approx x^2yz$	<p>[111111,111111,111111,111211,113156,113156]</p> <p>[111111,111111,111111,111211,113356,113356]</p> <p>[111111,111111,123336,123336,123346,123336]</p> <p>[111116,111116,111116,111216,113156,111116]</p> <p>[111116,111116,111116,111216,113356,111116]</p> <p>[111116,111116,123336,123336,123346,111116]</p> <p>[111155,111155,111155,111255,111155,113156]</p> <p>[111155,111155,111155,111255,111155,113356]</p> <p>[111155,111155,112155,111456,111155,111155]</p> <p>[111155,122256,122256,122356,111155,111155]</p> <p>[111444,111444,112444,111444,111444,111456]</p>	<p>(6,5525)</p> <p>(6,5531)</p> <p>(6,9619)</p> <p>(6,5550)</p> <p>(6,5560)</p> <p>(6,9633)</p> <p>(6,5554)</p> <p>(6,5564)</p> <p>(6,9544)</p> <p>(6,9662)</p> <p>(6,9547)</p>
PB[6,025]	<p>(A)</p> $x^2y \approx x^4y$ $xyz \approx yxz$ $xy^3 \approx x^2yx$ <p>(B)</p> $xyx \approx x^2y^3$ $xyz \approx yxz$ $xyz \approx x^3yz$	<p>[111111,111111,111111,111211,113156,113165]</p> <p>[111111,111111,111111,111211,113356,113365]</p> <p>[111111,111111,123336,123336,123346,126663]</p> <p>[111111,111111,123355,123355,125533,125534]</p> <p>[111116,111116,111116,111216,113156,666661]</p> <p>[111116,111116,111116,111216,113356,666661]</p> <p>[111116,111116,123336,123336,123346,666661]</p> <p>[111155,111155,111155,113455,555511,555512]</p> <p>[111155,111155,112155,111456,555511,555511]</p> <p>[111155,122256,122256,122356,555511,555511]</p> <p>[111444,111444,113446,444111,444121,444111]</p> <p>[111444,111444,113455,444111,444111,444112]</p>	<p>(6,5380)</p> <p>(6,5382)</p> <p>(6,5498)</p> <p>(6,5509)</p> <p>(6,2847)</p> <p>(6,2848)</p> <p>(6,5872)</p> <p>(6,2869)</p> <p>(6,2878)</p> <p>(6,5879)</p> <p>(6,2885)</p> <p>(6,2886)</p>
PB[6,026]	<p>(A)</p> $xyz \approx yxyz$ $xyzx \approx xzyx$ <p>(B)</p> $xyx \approx yx^2$ $xyz \approx xy^2z$ $xyzx \approx xzyx$	<p>[111111,111111,111111,111211,113156,113356]</p>	<p>(6,5526)</p>

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Id	Basis Proposal	Min.Lex	GAP
PB[6,027]	(A)	[111111,111111,111111,111211,113156,666666]	(6,5527)
	$x^2y \approx x^3y$	[111111,111111,111111,111211,113356,666666]	(6,5532)
	$xyx \approx xy^2$	[111111,111111,112111,111456,555555,555555]	(6,9539)
	$x^2yx \approx xyx$	[111111,111111,123336,123336,123346,666666]	(6,9643)
	(B)		
	$xyx \approx xy^2$ $xyx \approx x^2yx$ $xyz \approx xyxz$		
PB[6,028]	(A)	[111111,111111,111111,111411,112111,666666]	(6,3362)
	$x^2 \approx x^3$	[111111,111111,111111,111414,112111,111616]	(6,3364)
	$xy^2 \approx x^2y$	[111111,111111,111111,111414,555555,112414]	(6,5894)
	$xyz \approx xzy$	[111111,111111,111111,111444,111555,112444]	(6,5912)
	(B)	[111111,111111,111111,112111,555555,555556]	(6,3379)
	$x^2 \approx x^3$	[111111,111111,111112,111411,555555,112111]	(6,3619)
	$xyz \approx xzy$	[111111,111111,111112,111411,555555,555555]	(6,6173)
	$xyz \approx x^2yz$	[111111,111111,111112,111414,555555,111414]	(6,6155)
		[111111,111111,111112,111414,555555,112414]	(6,6157)
		[111111,111111,111112,111441,111551,112111]	(6,3621)
		[111111,111111,111112,111444,111555,111444]	(6,5919)
		[111111,111111,111112,111444,111555,112444]	(6,6160)
		[111111,111111,111112,444444,444454,112111]	(6,3623)
		[111111,111111,111112,444444,444454,444444]	(6,6178)
		[111111,111111,111112,444444,444455,444455]	(6,6181)
		[111111,111111,113113,444444,444444,113123]	(6,9817)
		[111111,121222,333333,121222,121222,121242]	(6,4002)
		[111111,121222,333333,121222,121224,121242]	(6,4004)
	[111111,122222,122222,122222,122322,166666]	(6,3972)	
	[111111,122222,122222,122223,155555,122322]	(6,3985)	
	[111111,122222,122222,122223,155555,155555]	(6,6625)	

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Id	Basis Proposal	Min.Lex	GAP
PB[6,029]	(A)	[111111,111111,111111,111416,112111,111416]	(6,3364)
	$x^2 \approx x^3$	[111111,111111,111111,111446,112446,111446]	(6,5919)
	$x^2y \approx xy^2$	[111111,111111,111112,111451,111451,112111]	(6,3621)
	$xyz \approx yxz$	[111111,111111,111112,111454,111454,111454]	(6,5912)
	(B)	[111111,111111,111112,111454,111454,112454]	(6,6160)
	$x^2 \approx x^3$	[111111,122226,122226,122226,122326,122226]	(6,3972)
	$x^2y \approx xy^2$	[111111,122226,122226,122236,122326,122226]	(6,3985)
	$xyz \approx yxz$	[111111,122255,122255,122255,122255,122355]	(6,6625)
	$xyz \approx x^2yz$	[111116,111116,111116,111416,112116,111116]	(6,3362)
		[111116,111116,111116,111446,112446,111116]	(6,6155)
		[111116,111116,111126,111416,112116,111116]	(6,3619)
		[111116,111116,111126,111446,111446,111116]	(6,5894)
		[111116,111116,111126,111446,112446,111116]	(6,6157)
		[111116,122226,122226,122226,122326,111116]	(6,4002)
		[111116,122226,122226,122236,122326,111116]	(6,4004)
		[111155,111155,111155,111455,111155,112155]	(6,6173)
		[111155,111155,111155,112155,111155,111156]	(6,3379)
	[111155,111155,111255,112155,111155,111156]	(6,3623)	
	[111155,111155,113355,113355,111155,111255]	(6,9817)	
	[111444,111444,111444,111444,111454,112444]	(6,6178)	
	[111444,111444,111444,111444,111455,112455]	(6,6181)	

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Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP
PB[6,030]	(A)	[111111,111111,111111,111416,112111,111614]	(6,2958)
	$x^2 \approx x^4$	[111111,111111,111111,111446,112446,111664]	(6,5770)
	$xy^2 \approx yxy$	[111111,111111,111111,111455,111544,112544]	(6,5772)
	$xyz \approx xzy$	[111111,111111,111112,111454,111545,111454]	(6,5770)
	(B)	[111111,111111,111112,111455,111544,111544]	(6,5772)
	$x^2 \approx x^4$	[111111,122226,122226,122226,122326,166662]	(6,1265)
	$x^2y \approx yx^2$	[111111,122444,122444,144222,144222,144232]	(6,1359)
	$xyz \approx x^3yz$	[111111,122444,122444,144222,144222,145222]	(6,1360)
		[111111,122444,122445,144222,144222,144222]	(6,1360)
		[111116,111116,111116,111416,112116,666661]	(6,1236)
		[111116,111116,111116,111446,112446,666661]	(6,3069)
		[111116,111116,111126,111446,111446,666661]	(6,3069)
		[111116,122226,122226,122226,122326,666661]	(6,3065)
		[111444,111444,113444,444111,444111,444121]	(6,1318)
		[111444,111444,113444,444111,444111,454111]	(6,1322)
		[111444,111445,113444,444111,444111,444111]	(6,1322)
	[111444,122444,122444,444111,444111,445111]	(6,3131)	
	[111444,122444,122445,444111,444111,444111]	(6,3131)	
PB[6,031]	(A)	[111111,111111,111111,111416,112111,666666]	(6,3367)
	$x^2 \approx x^3$	[111111,111111,111111,111446,112446,666666]	(6,5921)
	$x^2y \approx xyx$	[111111,111111,111112,111451,555555,112111]	(6,3622)
	$xyz \approx x^2yz$	[111111,111111,111112,111454,555555,111454]	(6,6161)
	(B)	[111111,111111,111112,111454,555555,112454]	(6,6163)
	$x^2 \approx x^3$	[111111,111111,111112,111455,555555,555555]	(6,6174)
	$x^2y \approx xyx$	[111111,122226,122226,122226,122326,666666]	(6,4008)
	$xyz \approx x^2yz$	[111111,122226,122226,122236,122326,666666]	(6,4010)

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Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP	
PB[6,032]	(A)	[111111,111111,111111,111416,112121,111614]	(6,5398)	
	$x^3 \approx x^5$	[111111,111111,111112,111451,111541,111112]	(6,5398)	
	$xy^2 \approx yxy$	[111111,111111,112111,111416,112121,111614]	(6,9352)	
	$xyz \approx xzy$	[111111,111111,112111,111446,112446,111664]	(6,5875)	
	(B)	[111111,111111,112111,111455,111544,112544]	(6,5882)	
	$x^2y \approx yx^2$	[111111,111111,112112,111454,111545,111454]	(6,5875)	
	$xyz \approx x^3yz$	[111111,111111,112112,111455,111544,111544]	(6,5882)	
			[111111,122226,122226,122226,122336,166662]	(6,2865)
			[111111,122226,122226,122236,122236,166662]	(6,2865)
			[111111,122226,122226,122326,122336,166662]	(6,5308)
			[111111,122444,122444,144222,144222,144233]	(6,2901)
			[111111,122444,122444,144222,144223,144223]	(6,2901)
			[111111,122444,122444,144222,144232,144233]	(6,5322)
			[111116,111116,111116,111416,112126,666661]	(6,2849)
			[111116,111116,111126,111416,111126,666661]	(6,2849)
			[111116,111116,112116,111416,112126,666661]	(6,5300)
			[111116,111116,112116,111446,112446,666661]	(6,5490)
			[111116,111116,112126,111446,111446,666661]	(6,5490)
			[111116,122226,122226,122226,122336,666661]	(6,5484)
			[111116,122226,122226,122236,122236,666661]	(6,5484)
		[111116,122226,122226,122326,122336,666661]	(6,9397)	
		[111444,111444,113444,444111,444111,444122]	(6,2887)	
		[111444,111444,113444,444111,444112,444112]	(6,2887)	
		[111444,111444,113444,444111,444121,444122]	(6,5314)	
PB[6,033]	(A)	[111111,111111,111111,112111,121451,666666]	(6,3368)	
	$x^2 \approx x^3$	[111111,111111,111111,112111,121455,121466]	(6,3370)	
	$xyx \approx xy^2$	[111111,111111,111111,112111,122451,666666]	(6,3374)	
	$xyzx \approx xzyx$	[111111,111111,111111,112111,122455,122466]	(6,3376)	
	(B)	[111111,111111,111112,123411,555555,555555]	(6,6175)	
	$x^2 \approx x^3$	[111111,111111,111112,123412,555555,555555]	(6,6176)	
	$xyx \approx xy^2$			
	$xyz \approx x^2yz$			
	$xyzx \approx xzyx$			

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Id	Basis Proposal	Min.Lex	GAP	
PB[6,034]	(A)	[111111,111111,111111,112111,121456,121456]	(6,3371)	
	$x^2 \approx x^3$	[111111,111111,111111,112111,122456,122456]	(6,3377)	
	$xyx \approx yx^2$	[111116,111116,111116,112116,121456,111116]	(6,3810)	
	$xyz \approx x^2yz$	[111116,111116,111116,112116,122456,111116]	(6,3823)	
	$xy^2z \approx xyxz$	[111155,111155,111155,112155,111155,121456]	(6,3816)	
	(B)	[111155,111155,111155,112155,111155,122456]	(6,3829)	
	$x^2 \approx x^3$	[111155,111155,111155,113456,111155,131155]	(6,6433)	
	$xyx \approx yx^2$	[111155,111155,111155,122456,111155,112155]	(6,6440)	
	$xyz \approx x^2yz$	[111444,111444,111444,111444,112444,121456]	(6,6438)	
	$xyxz \approx xy^2z$	[111444,111444,111444,111444,112444,122456]	(6,6445)	
	PB[6,035]	(A)	[111111,111111,111111,112111,121456,121465]	(6,2960)
		$x^2 \approx x^4$	[111111,111111,111111,112111,122456,122465]	(6,2962)
$xyx \approx yx^2$		[111116,111116,111116,112116,121456,666661]	(6,1237)	
$xyz \approx x^3yz$		[111116,111116,111116,112116,122456,666661]	(6,1238)	
$xy^2x \approx x^2y^2$		[111444,111444,113456,444111,444111,454111]	(6,1323)	
(B)		[111444,111444,123446,444111,444111,444121]	(6,1319)	
$x^2 \approx x^4$		[111444,111445,123454,444111,444111,444111]	(6,1349)	
$xyx \approx yx^2$		[111444,111445,123455,444111,444111,444111]	(6,1351)	
$xyx \approx x^2y^3$				
$xyz \approx x^3yz$				
PB[6,036]	(A)	[111111,111111,111111,112111,121456,122456]	(6,3372)	
	$x^2 \approx x^3$			
	$xyx \approx yx^2$			
	$xyz \approx x^2yz$			
	$xyzx \approx xzyx$			
	(B)			
	$x^2 \approx x^3$			
	$xyx \approx yx^2$			
$xyz \approx x^2yz$				
$xyza \approx yxza$				

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Id	Basis Proposal	Min.Lex	GAP
PB[6,037]	(A) $x^2 \approx x^3$ $xyx \approx xy^2$ $x^2yx \approx xyx$ (B) $x^2 \approx x^3$ $xyx \approx xy^2$ $xyz \approx x^2yz$	$[111111,111111,111111,112111,121456,666666]$ $[111111,111111,111111,112111,122456,666666]$ $[111111,111111,111112,123455,555555,555555]$	(6,3373) (6,3378) (6,6177)
PB[6,038]	(A) $x^2 \approx x^3$ $xyx \approx xy^2x$ $x^2yx \approx x^2y^2$ $xyx^2 \approx x^2yx$ (B) $x^2 \approx x^3$ $xyz \approx xy^2z$ $x^2yx \approx x^2y^2$ $x^2yx \approx yxyx$	$[111111,111111,111111,112115,112215,113316]$	(6,1075)
PB[6,039]	(Known basis) $x^2 \approx x^3$ $xyx \approx xyz$	$[111111,111111,111111,112115,555555,666666]$ $[111111,111111,111112,444444,555555,111141]$ $[111111,111111,111112,444444,555555,112141]$ $[111111,111111,111112,444444,555555,444414]$ $[111111,111111,111112,444444,555555,444555]$ $[111111,111111,111114,444444,112114,666666]$ $[111111,111111,111124,444444,112114,666666]$ $[111111,111111,111124,444444,444441,666666]$ $[111111,111111,111124,444444,444444,666666]$ $[111111,111111,333333,333312,555555,555555]$ Note: Website W(6,3)	(6,3393) (6,3557) (6,3625) (6,6172) (6,6180) (6,3558) (6,3626) (6,6187) (6,6188) (6,9884)

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Id	Basis Proposal	Min.Lex	GAP
PB[6,040]	(A) $x^2y \approx x^3y$ $xyx \approx xy^2x$ $xy^2 \approx xy^3$ $x^2yx \approx x^2y^2$ (B) $xyz \approx xy^2z$ $x^2yx \approx x^2y^2$ $x^2yx \approx yxyx$	[111111,111111,111111,112124,112124,113136]	(6,2664)
PB[6,041]	(A) $xy \approx x^2y$ $xyzx \approx xzyx$ (B) $xy \approx x^2y$ $xyzx \approx xzyx$	[111111,111111,111111,113416,555555,133416] [111111,111111,123116,444444,444444,123126]	(6,7184) (6,10475)
PB[6,042]	(A) $xy \approx x^2y$ $xyx^2 \approx xyx$ $xyxz^2 \approx xyz^2$ (B) $xy \approx x^2y$ $xyzx \approx xyxzx$ $xyzx \approx xyzyx$	[111111,111111,111111,113456,133456,666666]	(6,7216)
PB[6,043]	(A) $xyz \approx xzy$ $xyx \approx y^2x$ $x^4 \approx yzab$ (B) $x^2y \approx yxy$ $xyz \approx xzy$ $x^4 \approx yzab$	[111111,111111,111112,111112,111213,111214] [111111,111111,111112,111112,111213,111224] [111111,111111,111112,111112,111223,111214] [111111,111111,111112,111112,111223,111224]	(6,871) (6,872) (6,2538) (6,2539)

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Id	Basis Proposal	Min.Lex	GAP
PB[6,044]	(A) $x^2y \approx xy^2$ $xyz \approx yxz$ $x^4 \approx yzab$ (B) $x^2y \approx xy^2$ $xyz \approx yxz$ $x^4 \approx yzab$	[111111,111111,111112,111112,111234,111234]	(6,2558)
PB[6,045]	(A) $xy \approx yx$ $x^4 \approx y^3$ (B) $xy \approx yx$ $x^3 \approx yzab$	[111111,111111,111112,111121,111213,112134] [111111,111111,111112,111121,111223,112134]	(6,880) (6,2556)
PB[6,046]	(A) $xy \approx yx$ $x^4 \approx yzab$ (B) $xy \approx yx$ $x^4 \approx yzab$	[111111,111111,111112,111121,111234,112143] [111111,111111,111112,111122,111213,112234] [111111,111111,111112,111122,111223,112234]	(6,2222) (6,881) (6,2557)
PB[6,047]	(A) $x^2 \approx y^2$ $xyx \approx yxy$ (B) $x^2 \approx y^2$ $xyx \approx yxy$ $xyz \approx zyx$	[111111,111111,111112,111121,112114,111231]	(6,141)
PB[6,048]	(A) $xyx \approx yxy$ $xy^2 \approx z^2a$ (B) $x^3 \approx y^2z$ $x^3 \approx yzab$ $xyx \approx yxy$ $xyz \approx zyx$	[111111,111111,111112,111121,112114,111232] [111111,111111,111112,111121,112124,111232]	(6,659) (6,1865)

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Id	Basis Proposal	Min.Lex	GAP
PB[6,049]	(A) $xy \approx yx$ $x^3y^2 \approx x^4y$ (B) $xy \approx yx$ $x^2yza \approx xy^2za$ $x^6 \approx xyzabc$	[111111,111111,111112,111123,111234,112345]	(6,2582)
PB[6,050]	(A) $xyz \approx xzy$ $xyx \approx y^2x$ (B) $x^2y \approx yxy$ $xyz \approx xzy$ $xyza \approx xy^2za$	[111111,111111,111112,111141,111151,112113] [111111,111111,111112,111141,111151,112143] [111111,112222,113333,113333,113334,113345]	(6,2797) (6,2798) (6,5480)
PB[6,051]	(A) $xy \approx yx$ $x^4y \approx x^3y$ (B) $xy \approx yx$ $x^2yz \approx x^3yz$	[111111,111111,111112,111141,111451,112113] [111111,111111,111112,111141,111454,112143] [111111,112222,123333,123333,123334,123345]	(6,2802) (6,2803) (6,5487)
PB[6,052]	(A) $x^2y \approx x^3y$ $xyx \approx yxy$ (B) $x^2y \approx x^3y$ $xyx \approx yxy$ $xyx \approx x^2yx$ $xyza \approx xy^2za$	[111111,111111,111112,111141,123153,111112] [111111,111111,111112,111141,123153,111142]	(6,2675) (6,2677)
PB[6,053]	(A) $x^2y \approx x^3y$ $xyx \approx yx^3$ (B) $x^2y \approx x^3y$ $xyx \approx xyx^2$ $xyxy \approx xy^2x$ $xyza \approx yxza$	[111111,111111,111112,111141,123453,111112] [111111,111111,111112,112142,123453,111112] [111111,111111,111113,111123,111123,123446]	(6,2676) (6,2702) (6,2680)

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Id	Basis Proposal	Min.Lex	GAP
PB[6,054]	<p>(A)</p> $x^2 \approx x^3$ $xyx \approx x^2yx$ $x^2y^2 \approx xyx^2$ <p>(B)</p> $x^2 \approx x^3$ $xyx \approx x^2yx$ $x^2y^2 \approx xyx^2$ $x^2y^2 \approx yx^2y$ $xyza \approx xy^2za$	[111111,111111,111112,111144,123155,123155]	(6,2979)
PB[6,055]	<p>(A)</p> $x^2 \approx x^3$ $xyx \approx x^2yx$ $x^2y^2 \approx xyxy$ $xy^2z \approx yxyz$ $xyzzy \approx yxzy$ <p>(B)</p> $x^2 \approx x^3$ $xyx \approx x^2yx$ $x^2y^2 \approx xy^2x$ $xyza \approx yxza$	<p>[111111,111111,111112,111144,123455,123455]</p> <p>[111111,111111,111112,112144,123455,123455]</p> <p>[111111,111122,111122,111123,123455,123455]</p>	<p>(6,2980)</p> <p>(6,2986)</p> <p>(6,3032)</p>
PB[6,056]	<p>(A)</p> $xy \approx yx$ $x^2y^2 \approx x^3y$ <p>(B)</p> $xy \approx yx$ $x^2yz \approx xy^2z$ $xyzab \approx x^2yzab$	<p>[111111,111111,111112,111213,111151,112314]</p> <p>[111111,122222,122222,122223,122234,122345]</p>	<p>(6,5368)</p> <p>(6,5371)</p>
PB[6,057]	<p>(A)</p> $xyz \approx xzy$ $x^2y^2 \approx x^3y$ <p>(B)</p> $xyz \approx xzy$ $x^2yz \approx xy^2z$ $x^5 \approx xyzab$	[111111,111111,111112,111213,555555,112314]	(6,5369)

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Id	Basis Proposal	Min.Lex	GAP
PB[6,058]	(A)	[111111,111111,111112,111411,555555,112113]	(6,5680)
	$xy^2 \approx x^2y$	[111111,111111,111112,111441,111551,112113]	(6,5682)
	$xyz \approx xzy$	[111111,111111,111112,444444,444454,112113]	(6,5684)
	(B)	[111111,121222,333333,121222,121224,121245]	(6,5724)
	$x^2y \approx xy^2$	[111111,122222,122222,122223,155555,122324]	(6,5714)
	$xyz \approx xzy$ $xyza \approx x^2yza$		
PB[6,059]	(A)	[111111,111111,111112,111451,111451,112113]	(6,5682)
	$x^2y \approx xy^2$	[111111,122226,122226,122236,122346,122226]	(6,5714)
	$xyz \approx yxz$	[111116,111116,111126,111416,112136,111116]	(6,5680)
	(B)	[111116,122226,122226,122236,122346,111116]	(6,5724)
	$x^2y \approx xy^2$	[111155,111155,111255,112355,111155,111156]	(6,5684)
	$xyz \approx yxz$ $xyza \approx x^2yza$		
PB[6,060]	(A)	[111111,111111,111112,111451,111541,112111]	(6,3013)
	$x^2 \approx x^4$	[111111,111111,111112,111454,111545,112454]	(6,5790)
	$xy \approx yx$	[111111,111111,111112,111455,111544,112544]	(6,5791)
	$xy^3 \approx x^3y$	[111111,122226,122226,122236,122326,166662]	(6,1266)
		[111111,122444,122444,144222,144223,144232]	(6,1361)
		[111111,122444,122445,144222,144222,145222]	(6,1362)
		[111116,111116,111126,111416,112116,666661]	(6,1250)
		[111116,111116,111126,111446,112446,666661]	(6,3078)
		[111116,122226,122226,122236,122326,666661]	(6,3067)
		[111444,111444,113444,444111,444112,444121]	(6,1336)
		[111444,111445,113444,444111,444111,454111]	(6,1356)
		[111444,122444,122445,444111,444111,445111]	(6,3140)
PB[6,061]	(A)	[111111,111111,111112,111451,111541,112113]	(6,5466)
	$xy \approx yx$	[111111,122226,122226,122236,122346,166662]	(6,2867)
	$x^4 \approx x^6$	[111111,122444,122445,144222,144222,145223]	(6,2903)
	$xy^3 \approx x^3y$	[111116,111116,111126,111416,112136,666661]	(6,2862)
		[111116,122226,122226,122236,122346,666661]	(6,5488)
		[111444,111445,113444,444111,444111,454112]	(6,2898)

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Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP
PB[6,062]	(A) $x^2y \approx xyx$ $xy^2 \approx x^2y$ (B) $x^2y \approx xyx$ $x^2y \approx xy^2$ $xyza \approx x^2yza$	[111111,111111,111112,111451,555555,112113] [111111,122226,122226,122236,122346,666666]	(6,5683) (6,5733)
PB[6,063]	(A) $x^2y \approx x^3y$ $xy^2 \approx x^2y^2$ $xyx \approx xy^3$ $xyzx \approx xzyx$ (B) $xyx \approx xyxy$ $xyz \approx x^2yz$ $xyzx \approx xzyx$	[111111,111111,111112,123413,555555,111112] [111111,111111,111112,123443,123553,111112]	(6,5577) (6,5579)
PB[6,064]	(A) $x^2 \approx x^3$ $xyx \approx x^2yx$ $xy^2 \approx x^2y^2$ $xyz^2 \approx xzy^2$	[111111,111111,111112,123414,555555,123414] [111111,111111,111112,123444,123555,123444]	(6,6165) (6,6167)
PB[6,065]	(A) $x^2y \approx x^3y$ $xyx \approx x^2yx$ $xy^2 \approx yx^2$ (B) $xy^2 \approx yx^2$ $xyz \approx x^2yz$	[111111,111111,111112,123444,123444,123445]	(6,5854)
PB[6,066]	(A) $x^2y \approx x^3y$ $xy^2 \approx x^2y^2$ $xyx \approx yxyx$ $xy^2z \approx xyxz$ (B) $xyx \approx yx^3$ $xyz \approx x^2yz$ $xyxz \approx xy^2z$	[111111,111111,111112,123453,123453,111112] [111116,111116,111126,123436,111126,111116] [111155,111155,111255,111255,111155,123356]	(6,5580) (6,5635) (6,5637)

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Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP
PB[6,067]	(A) $x^2y \approx x^4y$ $xy^2 \approx x^3y^2$ $xyx \approx y^2xyx$ $xyxy \approx xy^2x$	[111111,111111,111112,123453,123543,111112] [111116,111116,111126,123436,111126,666661] [111444,111444,123455,444111,444112,444112]	(6,5427) (6,2852) (6,2890)
PB[6,068]	(A) $x^2y \approx x^3y$ $xy^2 \approx x^2y^2$ $xyx \approx xy^3$ (B) $xyx \approx xyxy$ $xyz \approx x^2yz$	[111111,111111,111112,123453,555555,111112]	(6,5581)
PB[6,069]	(A) $x^2 \approx x^3$ $xyx \approx x^2yx$ $xy^2 \approx yxy^2$ $xy^2z \approx xyxz$ (B) $x^2 \approx x^3$ $xy^2 \approx yx^2y$ $xyz \approx x^2yz$ $xyxz \approx xy^2z$	[111111,111111,111112,123454,123454,123454] [111116,111116,111126,123446,123446,111116] [111155,111155,123356,123356,111155,111255]	(6,6169) (6,6510) (6,9924)
PB[6,070]	(A) $x^2 \approx x^4$ $xyx \approx x^3yx$ $xy^2 \approx y^2xy^2$ $xyx^2 \approx xy^3$ (B) $x^2 \approx x^4$ $xy^2 \approx x^2y^2x$ $xy^2 \approx yx^3y$ $xyz \approx x^3yz$	[111111,111111,111112,123454,123545,123454] [111111,111111,111112,123455,123544,123544] [111116,111116,111126,123446,123446,666661] [111444,122456,122456,444111,444111,445111]	(6,5793) (6,5794) (6,3079) (6,3141)

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Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP
PB[6,071]	(A) $x^2 \approx x^3$ $xyx \approx x^2yx$ $xyx^2 \approx xy^2$ (B) $x^2 \approx x^3$ $xy^2 \approx xyx^2$ $xyz \approx x^2yz$	[111111,111111,111112,123454,555555,123454]	(6,6171)
PB[6,072]	(A) $xyx \approx xy^2$ $x^4 \approx x^2yz$ (B) $xyx \approx xy^2$ $xyx^2 \approx xyza$	[111111,111111,111112,444444,555555,112143]	(6,5686)
PB[6,073]	(A) $xy^2 \approx xy^3$ $xyz \approx xzy$ $xyx \approx xyx^2$ $xy^2x \approx y^2x^2$ (B) $x^2y \approx x^3y$ $xy^2 \approx xy^3$ $xyz \approx xzy$ $x^2y^2 \approx yx^2y$	[111111,111111,111113,111114,111121,111416] (6,2606) [111111,111111,111113,111114,111121,113316] (6,2667) [111111,111111,111113,111114,111123,111416] (6,2607) [111111,111111,111113,111114,111123,113136] (6,2610) [111111,111111,111113,111114,111123,113336] (6,2669) [111111,111111,111113,111114,111123,114446] (6,2670) [111111,111222,111333,113444,113444,113445] (6,5859) [111111,111222,111333,122444,122444,122445] (6,5861)	
PB[6,074]	(A) $x^3 \approx x^4$ $xyxz \approx x^2yz$ $xy^2x \approx x^2y^2$ $xyzx \approx xzyx$ $xy^2x \approx y^2x^2$	[111111,111111,111113,111114,111135,123156] (6,2737) [111111,111111,111113,111114,111135,123356] (6,2738) [111111,111111,111113,111334,111335,123446] (6,5217) [111111,111112,111112,111114,111125,123156] (6,2738) [111111,111112,111112,111114,111125,123256] (6,2750) [111111,111112,111112,111224,111225,123446] (6,5228) [111111,111112,111113,111224,111224,121456] (6,5217) [111111,111112,111113,111224,111224,122456] (6,5228) [111111,111112,112223,112223,112225,123436] (6,9319)	

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Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP
PB[6,075]	(A) $x^2 \approx x^3$ $xyx \approx yxy$ $x^2y^2 \approx xyx$ $xyxz \approx x^2yz$ (B) $x^2 \approx x^3$ $xyx \approx yxy$ $xyx \approx x^2yx$ $xyza \approx xyz^2a$	$[111111,111111,111113,111114,111311,121116]$ $[111111,111111,111113,111114,111311,121126]$ $[111111,111111,111113,111114,111313,121116]$ $[111111,111111,111113,111114,111313,121126]$	(6,1040) (6,1098) (6,1042) (6,1099)
PB[6,076]	(A) $x^2 \approx x^3$ $xyx \approx yx^2$ $xyxz \approx x^2yz$ $xy^2x \approx x^2y^2$ (B) $x^2 \approx x^3$ $xyx \approx yx^2$ $x^2y^2 \approx xy^2x$ $x^2yz \approx xyxz$	$[111111,111111,111113,111114,111315,123456]$ $[111111,111112,111112,111114,111215,123456]$ $[111111,111112,111112,111114,144115,123456]$ $[111111,111112,111113,112114,112114,123456]$	(6,1118) (6,1170) (6,1176) (6,1193)
PB[6,077]	(A) $x^2y \approx xyx$ $xyz \approx xyz^2$ $xyx \approx y^2x$ (B) $x^2y \approx xyx$ $x^2y \approx yxy$ $xyz \approx xyz^2$	$[111111,111111,111113,111114,111321,111116]$ $[111111,111111,111113,111114,111323,111116]$	(6,2638) (6,2639)
PB[6,078]	(A) $xyx \approx yxy$ $xy^2 \approx xy^3$ (B) $xyx \approx yxy$ $xyx \approx x^2yx$ $xy^2 \approx xy^3$ $xyza \approx xyz^2a$	$[111111,111111,111113,111114,111334,121116]$ $[111111,111111,111113,111114,111334,121126]$	(6,2675) (6,2677)

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Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP
PB[6,079]	(A)	[111111,111111,111113,111114,111335,121446]	(6,2683)
	$xy^2 \approx xy^3$ $xyxz \approx x^2yz$ $xy^2x \approx x^2y^2$	[111111,111112,111112,111114,144145,123126]	(6,2706)
PB[6,080]	(B)	[111111,111112,111112,111114,144145,123456]	(6,2741)
	$xy^2 \approx xy^3$ $xyza \approx xzya$ $x^3y^2 \approx yx^2y^2$ $x^2yzy \approx xy^2zx$	[111111,111112,111112,111124,111125,123456]	(6,2754)
PB[6,080]	(A)	[111111,111111,111113,111114,111335,123456]	(6,2741)
	$x^3 \approx x^4$	[111111,111111,111113,111134,111135,123456]	(6,2742)
	$xyx \approx yx^2$	[111111,111111,111113,111314,111335,123456]	(6,5211)
	$xyxz \approx x^2yz$	[111111,111112,111112,111114,111225,123456]	(6,2753)
	$xy^2x \approx x^2y^2$	[111111,111112,111112,111114,144145,123456]	(6,2760)
	(B)	[111111,111112,111112,111124,111125,123456]	(6,2754)
	$x^3 \approx x^4$	[111111,111112,111112,111214,111225,123456]	(6,5222)
	$xyx \approx yx^2$	[111111,111112,111113,112224,112224,123456]	(6,5247)
	$x^2y^2 \approx xy^2x$	[111111,111112,111123,111123,111125,123456]	(6,2764)
	$x^2yz \approx xyxz$	[111111,111112,111223,111224,111224,123456]	(6,5248)
PB[6,081]	(A)	[111111,111111,111113,111124,111124,121456]	(6,2683)
	$x^2y \approx x^3y$ $x^2y^2 \approx xyxy$ $xyzx \approx xzyx$ $xy^2x \approx y^2x^2$	[111111,111111,111123,111124,111123,123356]	(6,2706)
PB[6,082]	(A)	[111111,111111,111113,111134,111345,123456]	(6,2808)
	$xyz \approx yxz$	[111111,111112,111112,111124,111245,123456]	(6,2810)
	$x^4 \approx x^5$	[111111,111112,111123,111123,112235,123456]	(6,2814)
	$xy^2x \approx x^2y^2$	[111111,111112,111223,112334,112334,123456]	(6,5269)
	(B)	[111111,111112,111223,112334,112334,123456]	(6,5269)
$xyz \approx yxz$ $x^4 \approx x^5$ $x^2y^2 \approx xy^2x$ $x^2yzaz \approx xyz^2ax$			

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Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP
PB[6,083]	(A) $x^2y \approx x^3y$ $xyx \approx yxy$ $xy^2 \approx xy^3$ $x^2y^2 \approx xyx$	[111111,111111,111113,111211,113151,111116] [111111,111111,111113,111213,113351,111116] [111111,111112,123331,123331,123341,111116] [111111,111222,123111,111444,111444,111445]	(6,5547) (6,5557) (6,9631) (6,9631)
PB[6,084]	(A) $x^2y \approx x^3y$ $xyx \approx yxy$ $xy^2 \approx xy^3$ (B) $x^2y \approx x^3y$ $xyx \approx yxy$ $xyx \approx x^2yx$ $xy^2 \approx xy^3$	[111111,111111,111113,111211,113153,111116] [111111,111111,111113,111213,113353,111116] [111111,111112,123332,123332,123342,111116] [111111,111222,123222,111444,111444,111445]	(6,5548) (6,5558) (6,9632) (6,9632)
PB[6,085]	(A) $x^2y \approx x^3y$ $xyx \approx yx^2$ $x^2yx \approx xyx$ $xy^2x \approx x^2y^2$ (B) $x^2y \approx x^3y$ $xyx \approx yx^2$ $xyx \approx x^2yx$ $x^2y^2 \approx xy^2x$	[111111,111111,111113,111211,113155,113156] [111111,111111,111113,111213,113355,113356] [111111,111112,123333,123333,123343,123336] [111111,111222,123333,123444,123444,123445]	(6,5549) (6,5559) (6,9618) (6,9656)
PB[6,086]	(A) $xy^2 \approx xy^3$ $xyz \approx xzy$ $xyx \approx xy^2x$ (B) $xyz \approx xzy$ $xyz \approx xy^2z$	[111111,111111,111113,111211,555555,111116] [111111,111111,111113,111211,555555,555556] [111111,111111,111113,111213,555555,111116] [111111,111111,111113,111213,555555,555556] [111111,111111,111133,111211,111155,111166] [111111,111111,111133,111233,111155,111166] [111111,111111,112111,111411,555555,555655] [111111,111111,112111,444444,444445,444446] [111111,111222,333333,111444,111444,111445] [111111,111222,333333,333444,333444,333445] [111111,112222,113333,113333,113343,116666]	(6,5550) (6,5554) (6,5560) (6,5564) (6,5525) (6,5531) (6,9544) (6,9547) (6,9633) (6,9662) (6,9619)

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Id	Basis Proposal	Min.Lex	GAP
PB[6,087]	(A)	[111111,111111,111113,111211,555555,111156]	(6,5551)
	$x^2y \approx xyx$	[111111,111111,111113,111213,555555,111156]	(6,5561)
	$xyz \approx xyz^2$	[111111,111111,112111,111455,555555,555655]	(6,9545)
	(B)	[111111,111222,333333,113444,113444,113445]	(6,9638)
PB[6,088]	(A)	[111111,111111,111113,111211,555555,113116]	(6,5552)
	$xy^2 \approx xy^3$	[111111,111111,111113,111213,555555,113316]	(6,5562)
	$xyz \approx xzy$	[111111,111111,111133,111211,113155,113166]	(6,5570)
	$xyx \approx xyx^2$	[111111,111111,111133,111233,113355,113366]	(6,5572)
	(B)	[111111,111111,112111,444444,444445,444456]	(6,9548)
	$x^2y \approx x^3y$	[111111,111222,333333,121444,121444,121445]	(6,9653)
PB[6,089]	(A)	[111111,111111,111113,111211,555555,113156]	(6,5553)
	$x^2y \approx xyx$	[111111,111111,111113,111213,555555,113356]	(6,5563)
	$xy^2 \approx xy^3$	[111111,111111,112111,111456,555555,555655]	(6,9546)
	$xyx \approx xyx^2$	[111111,111222,333333,123444,123444,123445]	(6,9657)
	(B)		
	$x^2y \approx xyx$		
PB[6,090]	(A)	[111111,111111,111113,111314,555555,123416]	(6,5613)
	$x^3 \approx x^4$	[111111,111111,111133,111344,123455,123466]	(6,5659)
	$xyxz \approx x^2yz$	[111111,111112,111112,111214,555555,123416]	(6,5621)
	$xy^2x \approx x^2y^2$	[111111,111112,112123,444444,112123,123156]	(6,9450)
	$xyzx \approx xzyx$	[111111,111122,111122,111244,123455,123466]	(6,5668)
	(B)	[111111,111122,112233,112233,123455,123466]	(6,9466)
	$x^3 \approx x^4$		
	$x^2yx \approx x^3yx$		
	$x^2y^2 \approx xy^2x$		
	$xyza \approx xzya$		
$x^2yz \approx xy^2zx$			

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Id	Basis Proposal	Min.Lex	GAP
PB[6,091]	(Known basis)	[111111,111111,111113,111314,555555,123456]	(6,5614)
	Lee and Zhang	[111111,111111,123456,444444,445444,446445]	(6,9582)
	[4, Proposition 11.1]	[111111,111112,111112,111214,555555,123456]	(6,5622)
		[111111,111112,112123,444444,112123,123456]	(6,9451)
Note: Lee and Zhang [4]			
PB[6,092]	(A)	[111111,111111,111114,444444,121151,666666]	(6,7541)
	$x^2 \approx x^3$	[111111,111111,111114,444444,122151,666666]	(6,7542)
	$xyx \approx xy^2$	[111111,111111,123111,444444,444441,666666]	(6,10417)
	$xyxz \approx xyz$	[111111,111111,123111,444444,444666,666666]	(6,10646)
	(B)	[111111,111111,123112,444444,555555,444414]	(6,10418)
	$x^2 \approx x^3$	[111111,111111,123112,444444,555555,444555]	(6,10647)
	$xyx \approx xy^2$	[111111,111111,123113,444444,555555,123143]	(6,10244)
	$xyz \approx xyxz$	[111111,111111,123333,123335,125555,126666]	(6,10298)
$x^2yzx \approx x^2zyx$			
PB[6,093]	(A)	[111111,111111,111122,123434,111122,123434]	(6,5441)
	$x^2y \approx x^3y$		
	$xyx \approx x^2yx$		
	$xy^2 \approx x^2y^2$		
	$xyx^2 \approx xyxy$		
PB[6,094]	(A)	[111111,111111,111123,123434,111123,123456]	(6,5595)
	$x^2y \approx x^3y$		
	$x^2yx \approx xyx^2$		
	$xyxy \approx yx^2y$		
	(B)		
	$x^2y \approx x^3y$		
	$x^2yx \approx xyx^2$		
	$xyxz \approx yx^2z$		
$x^2y^2x \approx x^2y^3$			

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Id	Basis Proposal	Min.Lex	GAP
PB[6,095]	(A) $x^2 \approx x^3$ $xyx \approx x^2yx$ $x^2y^2 \approx xyxy$ $xy^2z \approx yxyz$ (B) $x^2 \approx x^3$ $xyx \approx x^2yx$ $x^2y^2 \approx xy^2x$ $xyxz \approx yx^2z$	[111111,111111,111123,123444,123444,123456]	(6,6183)
PB[6,096]	(A) $x^2y \approx x^3y$ $x^2y^2 \approx xyxy$ $xyzx \approx xzyx$ (B) $x^2y \approx x^3y$ $xyza \approx xzya$ $x^2y^2x \approx x^2y^3$	[111111,111111,111123,444444,111123,123156] [111111,111111,111233,111233,123455,123466]	(6,5596) (6,5603)
PB[6,097]	(Known basis) Lee and Zhang [4, Proposition 12.1]	[111111,111111,111123,444444,111123,123456] Note: Lee and Zhang [4]	(6,5597)
PB[6,098]	(A) $x^2y \approx x^3y$ $xyxy \approx yx^2y$ $xyzx \approx xzyx$	[111111,111111,111124,112124,111124,125456]	(6,2708)
PB[6,099]	(A) $x^2 \approx x^3$ $xyx \approx xyx^2$ $x^2yx \approx x^2y^2$ $xyxy \approx x^2yx$ (B) $x^2 \approx x^3$ $xyx \approx xyx^2$ $x^2yx \approx yx^2y$ $xyza \approx xyz^2a$	[111111,111111,111133,111144,121155,121355]	(6,2979)

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Id	Basis Proposal	Min.Lex	GAP
PB[6,100]	(A)	[111111,111111,111133,111144,121456,121465]	(6,3001)
	$x^2 \approx x^4$	[111111,111111,111133,111144,123356,123365]	(6,3003)
	$xyx \approx x^3yx$	[111111,111122,111122,111144,123156,123165]	(6,3003)
	$xyxz \approx x^2yz$	[111111,111122,111122,111144,123256,123265]	(6,3037)
	$xy^2x \approx x^2y^2$	[111116,111116,111136,111146,121456,666661]	(6,1247)
	$xyzx \approx xzyx$	[111116,111116,111136,111146,123356,666661]	(6,1248)
	$xy^2x \approx y^2x^2$	[111116,111126,111126,111146,123156,666661]	(6,1248)
	(B)	[111116,111126,111126,111146,123256,666661]	(6,1256)
	$x^2 \approx x^4$	[111155,111155,111355,121456,555511,555611]	(6,1289)
	$xyx \approx x^3yx$	[111155,111155,111355,123455,555511,555611]	(6,1290)
	$xyzx \approx xzyx$	[111155,111255,111255,123455,555511,555611]	(6,1297)
	$x^2yza^2 \approx azaxayax$	[111155,111255,111355,113456,555511,555511]	(6,1290)
		[111155,111255,111355,122456,555511,555511]	(6,1297)
		[111444,111444,123446,444111,445111,446111]	(6,1333)
		[111444,111444,123455,444111,445111,446111]	(6,1334)
		[111444,112444,113456,444111,444111,446111]	(6,1333)
		[111444,112444,113456,444111,445111,445111]	(6,1334)
		[111444,112444,123446,444111,445111,444111]	(6,1342)
		[113333,123356,331111,341111,331111,361111]	(6,1387)
		[113333,123356,331111,341111,351111,351111]	(6,1388)
	[113333,123446,331111,341111,351111,331111]	(6,1388)	
	[113333,123446,331111,341111,351111,341111]	(6,1395)	
PB[6,101]	(A)	[111111,111111,111133,111144,123456,124365]	(6,3006)
	$x^2 \approx x^4$	[111111,111111,111134,111143,123456,123465]	(6,3008)
	$xyx \approx x^3yx$	[111111,111123,111132,111123,123456,123465]	(6,3040)
	$xy^2x \approx x^2y^2$		
	$xy^2z \approx y^2xz$		

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Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP
PB[6,102]	(A)	[111111,111111,111133,111211,111155,113156]	(6,5549)
	$x^2y \approx xyx$	[111111,111111,111133,111233,111155,113356]	(6,5559)
	$xy^2 \approx xy^3$	[111111,112222,113333,113333,113343,123336]	(6,9618)
	$xyx \approx xyx^2$	[111111,112222,113333,123444,123444,123445]	(6,9656)
	$xy^2x \approx y^2x^2$		
	(B)		
	$x^2y \approx xyx$		
	$x^2y \approx x^3y$		
PB[6,103]	(A)	[111111,111111,111133,111211,111156,111156]	(6,5524)
	$x^2y \approx yxy$	[111111,111111,111133,111233,111156,111156]	(6,5530)
	$xy^2 \approx xy^3$	[111111,112222,113336,113336,113346,113336]	(6,9639)
	$x^2y^2 \approx x^2y$	[111116,111116,111136,111216,111156,111116]	(6,5522)
	$xyxz \approx x^2yz$	[111116,111116,111136,111236,111156,111116]	(6,5528)
	(B)	[111116,112226,113336,113336,113346,111116]	(6,9642)
	$x^2y \approx yxy$	[111444,111444,112444,111444,111445,111446]	(6,9541)
	$xyz \approx xy^2z$	[111444,111444,112445,111444,111445,111446]	(6,9542)
PB[6,104]	(A)	[111111,111111,111133,111211,111156,111165]	(6,5380)
	$xy^2 \approx xy^4$	[111111,111111,111133,111233,111156,111165]	(6,5382)
	$xyz \approx xzy$	[111111,112222,113336,113336,113346,116663]	(6,5498)
	$xyx \approx y^3x^2$	[111111,112222,113355,113355,115533,115534]	(6,5509)
		[111116,111116,111136,111216,111156,666661]	(6,2847)
		[111116,111116,111136,111236,111156,666661]	(6,2848)
		[111116,112226,113336,113336,113346,666661]	(6,5872)
		[111155,111155,111355,111455,555511,555512]	(6,2869)
		[111155,111155,112155,111455,555511,555611]	(6,2878)
		[111155,122255,122255,122355,555511,566611]	(6,5879)
		[111444,111444,113444,444111,444121,446111]	(6,2885)
		[111444,111444,113444,444111,445111,445112]	(6,2886)

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Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP
PB[6,105]	(A)	[111111,111111,111133,111211,113156,113156]	(6,5570)
	$x^2y \approx x^3y$	[111111,111111,111133,111233,113356,113356]	(6,5572)
	$xyz \approx yxz$	[111111,112222,123336,123336,123346,123336]	(6,9647)
	$x^2yx \approx xyx$	[111116,111116,111136,111216,113156,111116]	(6,5552)
	(B)	[111116,111116,111136,111236,113356,111116]	(6,5562)
	$x^2y \approx x^3y$	[111116,112226,123336,123336,123346,111116]	(6,9653)
	$xyx \approx x^2yx$	[111444,111444,112444,111444,111445,111456]	(6,9548)
PB[6,106]	(A)	[111111,111111,111133,111211,113156,113165]	(6,5422)
	$xy \approx yx$	[111111,111111,111133,111233,113356,113365]	(6,5425)
	$x^4y \approx x^2y$	[111111,112222,123336,123336,123346,126663]	(6,5499)
	(B)	[111111,112222,123355,123355,125533,125534]	(6,5510)
	$xy \approx yx$	[111116,111116,111136,111216,113156,666661]	(6,2850)
	$x^2y \approx x^4y$	[111116,111116,111136,111236,113356,666661]	(6,2851)
		[111116,112226,123336,123336,123346,666661]	(6,5873)
		[111155,111155,111355,113455,555511,555512]	(6,2870)
		[111155,111155,112155,111456,555511,555611]	(6,2879)
		[111155,122256,122256,122356,555511,566611]	(6,5880)
	[111444,111444,113446,444111,444121,446111]	(6,2888)	
	[111444,111444,113455,444111,445111,445112]	(6,2889)	
PB[6,107]	(A)	[111111,111111,111133,111213,111155,111166]	(6,5526)
	$x^2y \approx xyx$		
	$xyz \approx xyz^2$		
	$x^2yz \approx x^2zy$		
	(B)		
	$x^2y \approx xyx$		
$xyz \approx xy^2z$			
$x^2yz \approx x^2zy$			

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Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP
PB[6,108]	(A)	[111111,111111,111133,111344,123456,123465]	(6,5453)
	$x^3 \approx x^5$	[111111,111122,111122,111244,123456,123465]	(6,5457)
	$xyz \approx yxz$	[111111,111122,112233,112233,123456,123465]	(6,9383)
	$xy^2x \approx x^2y^2$	[111116,111116,111136,111346,123456,666661]	(6,2856)
	(B)	[111116,111126,111126,111246,123456,666661]	(6,2858)
	$x^3 \approx x^5$	[111116,111126,112236,112236,123456,666661]	(6,5305)
	$xyz \approx yxz$	[111155,111155,111355,123456,555511,555613]	(6,2872)
	$x^2y^2 \approx xy^2x$	[111155,111255,111255,123456,555511,555612]	(6,2874)
	$x^2yzay \approx xy^2zax$	[111155,111255,112355,123456,555511,555511]	(6,2881)
	$x^2yzaz \approx xyz^2ax$	[111444,112444,123456,444111,444111,446112]	(6,2894)
		[111444,112444,123456,444111,445122,445122]	(6,5319)
PB[6,109]	(A)	[111111,111111,111133,444444,111155,123156]	(6,7628)
	$x^2 \approx x^3$	[111111,111111,111133,444444,121155,123156]	(6,7653)
	$xyx \approx x^2yx$	[111111,111111,111333,111444,111555,123446]	(6,7682)
	$xyxz \approx x^2yz$	[111111,111111,111333,111444,123455,123466]	(6,7688)
	$xy^2x \approx x^2y^2$	[111111,111111,111333,121444,121555,123446]	(6,7715)
	$xyz^2y \approx xz^2y^2$	[111111,111111,111333,121444,123455,123466]	(6,7718)
	(B)	[111111,111122,111122,444444,111155,123156]	(6,8332)
	$x^2 \approx x^3$	[111111,111222,111222,111444,111555,123446]	(6,8029)
	$xyx \approx x^2yx$	[111111,111222,111222,111444,123455,123466]	(6,8415)
	$x^2y^2 \approx xy^2x$	[111111,111222,333333,111444,111444,121456]	(6,11425)
$x^2yz \approx xyxz$	[111111,112222,113333,113333,115555,123436]	(6,10934)	
$xy^2z^2 \approx xzy^2z$	[111111,112222,113333,113333,123455,123466]	(6,11222)	
PB[6,110]	(A)	[111111,111111,111133,444444,121156,121156]	(6,7655)
	$x^2 \approx x^3$	[111111,111111,123116,444444,445445,123116]	(6,10616)
	$xyx \approx x^2yx$	[111116,111116,111336,121446,121556,111116]	(6,7655)
	$xyx \approx xy^2x$	[111155,112255,113356,114456,111155,111155]	(6,10616)
	$xyxz \approx x^2yz$		
	$xyzx \approx xzyx$		
	(B)		
	$x^2 \approx x^3$		
	$xyx \approx x^2yx$		
	$xyz \approx xy^2z$		
$x^2yz \approx xyxz$			
$xyzzy \approx xzy^2$			

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Id	Basis Proposal	Min.Lex	GAP
PB[6,111]	(A)	[111111,111111,111133,444444,121156,121165]	(6,6222)
	$x^2 \approx x^4$	[111111,111111,123116,444444,445445,126113]	(6,9873)
	$xyx \approx x^3yx$	[111116,111116,111336,121446,121556,666661]	(6,4058)
	$xyx \approx xy^3x$	[111155,111155,123355,124455,555511,556611]	(6,4162)
	$xyxz \approx x^2yz$	[111155,112255,113356,114456,555511,555511]	(6,4164)
	$xy^2x \approx x^2y^2$	[111444,122446,133446,444111,455111,444111]	(6,4270)
	$xyzx \approx xzyx$		
	(B)		
$x^2 \approx x^4$			
$xyx \approx x^2y^3$			
$xyz \approx xy^3z$			
$xyzx \approx xzy^2$			
PB[6,112]	(A)	[111111,111111,111133,444444,121456,121456]	(6,7659)
	$x^2 \approx x^3$	[111111,111111,123446,444444,445445,123446]	(6,10620)
	$xyx \approx x^2yx$		
	$xyx \approx xy^2x$		
	$xyxz \approx x^2yz$		
	(B)		
	$x^2 \approx x^3$		
	$xyx \approx x^2yx$		
$xyz \approx xy^2z$			
$x^2yz \approx xyxz$			
PB[6,113]	(A)	[111111,111111,111133,444444,121456,121465]	(6,6225)
	$x^2 \approx x^4$	[111111,111111,123446,444444,445445,126443]	(6,9878)
	$xyx \approx x^3yx$		
	$xyx \approx xy^3x$		
	$xyxz \approx x^2yz$		
	$xy^2x \approx x^2y^2$		

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Id	Basis Proposal	Min.Lex	GAP
PB[6,114]	(A)	[111111,111111,111133,444444,123156,123165]	(6,6234)
	$x^2 \approx x^4$	[111111,111122,111122,444444,123156,123165]	(6,6502)
	$xyx \approx x^3yx$	[111116,111116,111136,123446,123556,666661]	(6,4061)
	$xyxz \approx x^2yz$	[111116,111226,111226,123446,123556,666661]	(6,4096)
	$xy^2x \approx x^2y^2$	[111155,111155,123356,124456,555511,556611]	(6,4166)
	$xyzx \approx xzyx$	[111155,112255,123356,124456,555511,555511]	(6,4205)
	(B)	[111444,122456,133456,444111,444111,466111]	(6,4273)
	$x^2 \approx x^4$	[111444,122456,133456,444111,455111,455111]	(6,4302)
	$xyx \approx x^3yx$		
	$x^2y^2 \approx xy^2x$		
$xyza \approx xzya$			
PB[6,115]	(A)	[111111,111111,111133,444444,123456,123465]	(6,6239)
	$x^2 \approx x^4$	[111111,111111,123456,124356,555555,556655]	(6,9880)
	$xyx \approx x^3yx$	[111111,111122,111122,444444,123456,123465]	(6,6506)
	$xyxz \approx x^2yz$		
	$xy^2x \approx x^2y^2$		
	(B)		
	$x^2 \approx x^4$		
$xyx \approx x^3yx$			
$x^2y^2 \approx xy^2x$			
$x^2yz \approx xyxz$			
PB[6,116]	(A)	[111111,111111,111134,444444,121156,666666]	(6,7675)
	$x^2 \approx x^3$	[111111,111111,123116,444444,445441,666666]	(6,10425)
	$xyx \approx xyx^2$	[111111,111111,123444,444444,445666,666666]	(6,10644)
	$x^2yx \approx x^2y^2$	[111111,111111,123444,444444,555555,556444]	(6,10642)
	$xy^2z \approx xyz$		
	(B)		
	$x^2 \approx x^3$		
$xyx \approx xyxy$			
$xyz \approx xy^2z$			
PB[6,117]	(A)	[111111,111111,111134,444444,123456,666666]	(6,7676)
	$x^2 \approx x^3$	[111111,111111,123456,444444,445441,666666]	(6,10426)
	$xyx \approx xyx^2$	[111111,111111,123456,444444,445666,666666]	(6,10643)
	$xyxy \approx xy^2x$	[111111,111123,333333,111123,123456,666666]	(6,8500)
	$x^2yxz \approx x^2yz$		

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Id	Basis Proposal	Min.Lex	GAP
PB[6,118]	(A) $x^2y \approx x^3y$ $xyz \approx yxz$	[111111,111111,111233,111233,123456,123456] [111116,111116,111236,111236,123456,111116] [111444,111444,112445,111444,112445,123456]	(6,5604) (6,5640) (6,9589)
PB[6,119]	(A) $x^2y \approx x^4y$ $xyz \approx yxz$ (B) $x^2y \approx x^4y$ $xyz \approx yxz$ $x^2y^2x \approx x^3y^4$	[111111,111111,111233,111233,123456,123465] [111116,111116,111236,111236,123456,666661] [111444,111444,123456,444111,445112,445112]	(6,5449) (6,2854) (6,2892)
PB[6,120]	(A) $x^2 \approx x^4$ $xyx \approx x^3yx$ $xyxz \approx x^2yz$ $xy^2x \approx x^2y^2$ $xy^2x \approx y^2x^2$ (B) $x^2 \approx x^4$ $xyx \approx x^3yx$ $x^2y^2 \approx xy^2x$ $x^2y^2 \approx yx^2y$ $x^2yz \approx xyxz$	[111111,111111,111333,111444,123456,123465] [111111,111111,111333,111446,123456,111664] [111111,111111,111333,121444,123456,123465] [111111,111111,111333,121446,123456,121664] [111111,111222,111222,111444,123456,123465] [111111,111222,111222,111446,123456,111664] [111111,112222,113333,113333,123456,123465] [111111,112222,113336,113336,123456,116663] [111111,112222,113355,123456,115533,115533] [111116,111116,111336,111446,123456,666661] [111116,111116,111336,121446,123456,666661] [111116,111226,111226,111446,123456,666661] [111116,112226,113336,113336,123456,666661] [111155,111155,113355,123456,555511,556611] [111155,111155,123355,123456,555511,556611] [111155,112255,113355,123456,555511,555511] [111155,112255,113356,123456,555511,555511] [111155,122255,122255,123456,555511,566611] [111444,122444,123456,444111,444111,466111] [111444,122444,123456,444111,455111,455111] [111444,122446,123456,444111,455111,444111]	(6,6282) (6,6246) (6,6284) (6,6269) (6,6524) (6,6385) (6,9915) (6,6858) (6,7001) (6,4053) (6,4059) (6,4079) (6,6806) (6,4157) (6,4163) (6,4189) (6,4198) (6,6950) (6,4265) (6,4288) (6,4271)

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Id	Basis Proposal	Min.Lex	GAP
PB[6,121]	(A)	[111111,111111,111333,121456,121564,121645]	(6,9095)
	$x^2 \approx x^5$	[111156,111156,111356,121456,555561,666615]	(6,9105)
	$xyx \approx y^4x^2$	[111446,111446,123446,444661,445661,666114]	(6,14976)
	$xyxz \approx x^2yz$	[111446,112446,113456,444661,444661,666114]	(6,14976)
	$xy^2x \approx x^2y^2$	[113336,123356,336661,346661,336661,661113]	(6,15941)
		[113355,123356,335511,345511,551133,551133]	(6,15951)
PB[6,122]	(A)	[111111,111111,111333,123456,123564,123645]	(6,9096)
	$x^2 \approx x^5$	[111111,111222,111222,123456,123564,123645]	(6,9098)
	$xyz \approx yxz$	[111156,111156,111356,123456,555561,666615]	(6,9106)
	$xy^2x \approx x^2y^2$	[111156,111256,111256,123456,555561,666615]	(6,9108)
		[111446,111446,123456,444661,445661,666114]	(6,14978)
		[111446,112446,123456,444661,444661,666114]	(6,14980)
		[113336,123456,336661,336661,356661,661113]	(6,15942)
	[113336,123456,336661,346661,346661,661113]	(6,15944)	
		[113355,123456,335511,335511,551133,561133]	(6,15952)
PB[6,123]	(A)	[111111,111111,112111,111416,555555,111416]	(6,9677)
	$xyxz \approx xyz$	[111111,111111,112111,444444,444456,444456]	(6,9696)
	$xyzzy \approx xzy$	[111111,121226,333333,121226,121246,121226]	(6,9776)
		[111116,111116,112116,111446,111556,111116]	(6,9677)
		[111116,122226,122226,122326,155556,111116]	(6,9776)
		[111444,111444,112444,111444,111455,111466]	(6,9696)
PB[6,124]	(A)	[111111,111111,112111,111416,555555,111614]	(6,9531)
	$xy^2 \approx x^3y^2$	[111111,111111,112111,444444,444456,444465]	(6,9551)
	$xyz \approx xzy$	[111111,121226,333333,121226,121246,161662]	(6,5744)
	$xyx \approx xy^3x$	[111111,121255,333333,121255,151522,151524]	(6,5758)
	(B)	[111116,111116,112116,111446,111556,666661]	(6,5736)
	$xyz \approx xzy$	[111116,122226,122226,122326,155556,666661]	(6,9649)
	$xyz \approx x^3yz$	[111155,111155,113355,114455,555511,555512]	(6,5750)
PB[6,125]	(A)	[111111,111111,112111,111456,111456,666666]	(6,9689)
	$x^2y \approx xy^2$	[111111,122256,122256,122356,122256,666666]	(6,9777)
	$xyxz \approx xyz$		
	(B)		
	$x^2y \approx xy^2$		
	$xyz \approx xyxz$		

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Id	Basis Proposal	Min.Lex	GAP
PB[6,126]	(A)	[111111,111111,112111,111456,111546,666666]	(6,9534)
	$x^2y \approx xyx$	[111111,122256,122256,122356,155526,666666]	(6,5746)
	$xyz \approx x^3yz$	[111111,122446,122446,144226,144236,666666]	(6,5760)
PB[6,127]	(A)	[111111,111111,112111,111456,111564,111645]	(6,9800)
	$xy \approx yx$	[111111,122256,122256,122356,155562,166625]	(6,9804)
	$x^3 \approx x^6$	[111111,123355,135522,135522,152233,152234]	(6,15954)
	$xy^4 \approx x^4y$	[111156,111156,112156,111456,555561,666615]	(6,9802)
	(B)	[111156,122256,122256,122356,555561,666615]	(6,9805)
	$xy \approx yx$ $xyz \approx x^4yz$	[113355,123355,335511,335511,551133,551134]	(6,15955)
PB[6,128]	(A)	[111111,111111,112111,111456,555555,555614]	(6,9535)
	$x^2y \approx x^4y$	[111111,122256,122256,122356,555555,566612]	(6,5747)
	$xyx \approx x^3yx$	[111111,122446,122446,644221,644231,666666]	(6,5761)
	$xy^2 \approx x^3y^2$		
	$xyx^2 \approx x^3y$		
(B)	$x^2y \approx x^2yx^2$ $xyz \approx x^3yz$		
PB[6,129]	(A)	[111111,111111,112114,444444,111151,666666]	(6,9699)
	$x^2y \approx x^3y$	[111111,111111,112114,444444,444454,666666]	(6,9700)
	$xyx \approx xy^2$	[111111,111111,112144,444444,555555,555556]	(6,9702)
	$xy^2 \approx xy^3$	[111111,121122,333333,444444,121122,121325]	(6,9787)
	$x^2yx \approx x^2y$	[111111,122222,122222,122325,155555,166666]	(6,9753)

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Id	Basis Proposal	Min.Lex	GAP
PB[6,130]	(A)	[111111,111111,113136,444444,113456,113166]	(6,12178)
	$xy \approx x^2y$	[111111,111111,113356,113456,113556,666666]	(6,12315)
	$xy \approx xy^2$	[111111,111111,113456,444444,445456,446456]	(6,12351)
	$xyxz \approx xyzx$	[111111,121226,333333,121226,123256,121266]	(6,14203)
	(B)	[111111,121226,333333,123446,123446,121666]	(6,14594)
	$xy \approx x^2y$	[111111,122256,122256,122456,122556,666666]	(6,14204)
	$xy \approx xy^2$	[111111,122256,123356,123356,125556,666666]	(6,14604)
	$xyxz \approx xyzxz$	[111116,111116,113336,113456,115556,111616]	(6,12178)
		[111116,111116,113336,113456,115556,116666]	(6,12315)
		[111116,122226,122226,122456,155556,111616]	(6,14203)
		[111116,122226,122226,122456,155556,166666]	(6,14204)
		[111116,122226,123356,123356,155556,116616]	(6,14594)
		[111116,122226,123356,123356,155556,166666]	(6,14604)
		[111155,111155,113456,444466,115155,446466]	(6,14052)
		[111155,122255,123455,144455,115155,115155]	(6,12351)
	[111155,122456,122456,444466,155155,466466]	(6,14607)	
PB[6,131]	(A)	[111111,111111,113136,444444,123456,113166]	(6,12185)
	$xy \approx x^2y$	[111111,111111,113356,123456,113556,666666]	(6,12324)
	$xyx^2 \approx xyx$	[111111,111111,123136,444444,123456,123166]	(6,12392)
	$xyxz \approx xyzx$	[111111,111111,123356,123456,123556,666666]	(6,12462)
	(B)	[111111,111111,123456,444444,445456,446456]	(6,12492)
	$xy \approx x^2y$	[111111,121226,333333,121226,123456,121266]	(6,14252)
	$xyx \approx xyx^2$	[111111,122256,122256,123456,122556,666666]	(6,14253)
	$xyxz \approx xyxzx$	[111116,111116,113336,114446,123456,111166]	(6,12774)
		[111116,111116,113336,114446,123456,116666]	(6,12885)
		[111116,111116,123336,123456,125556,111616]	(6,13664)
		[111116,111116,123336,123456,125556,116666]	(6,13685)
		[111116,122226,122226,123456,155556,111616]	(6,14222)
		[111116,122226,122226,123456,155556,166666]	(6,14223)
		[111155,111155,123456,444466,115155,446466]	(6,14080)
		[111155,122255,123456,144455,115155,115155]	(6,13136)
	[111155,122256,123456,144456,115155,115155]	(6,13698)	

Continued on next page

Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP
PB[6,132]	(Known basis) Lee and Zhang [4, Proposition 13.1]	[111111,111111,113156,121411,555555,556513]	(6,10203)
		[111111,111111,113333,114444,123456,124365]	(6,10409)
		[111111,111111,113356,123456,555555,556613]	(6,10218)
		[111111,111111,123333,123456,125555,125634]	(6,10410)
		[111111,111111,123456,124365,555555,666666]	(6,10411)
		[111111,111111,123456,444444,444444,456123]	(6,9882)
		[111111,122256,122256,123456,555555,566612]	(6,8921)
		[111111,122446,123456,644221,644221,666666]	(6,9062)
Note: Lee and Zhang [4]			
PB[6,133]	(Known basis) Lee and Zhang [4, Proposition 14.4]	[111111,111111,113156,444444,113656,666666]	(6,12198)
		[111111,111111,333333,333456,555555,553456]	(6,12526)
		[111111,121256,333333,121256,126256,666666]	(6,14467)
		Note: Lee and Zhang [4]	
PB[6,134]	(A) $xy \approx x^4y$ $xyz \approx xzy$ (B) $xy \approx x^4y$ $xyz \approx xzy$	[111111,111111,113156,444444,115163,116135]	(6,14901)
		[111111,111111,333333,333456,333564,333645]	(6,14911)
		[111111,121256,333333,121256,151562,161625]	(6,14954)
		[111111,121446,333333,141662,141662,161224]	(6,15915)
		[111156,111156,113356,114456,555561,666615]	(6,14930)
		[111156,122256,122256,144456,555561,666615]	(6,14949)
		[111446,122446,133446,444661,444661,666114]	(6,15930)
PB[6,135]	(A) $xy \approx y^5x$ (B) $xy \approx yx$ $xy \approx x^5y$	[111111,111111,113456,114365,115643,116534]	(6,9403)
		[111111,122456,122456,144265,155642,166524]	(6,5327)
		[111111,123356,132265,132265,156632,165523]	(6,5331)
		[111111,123356,135562,135562,156623,162235]	(6,9338)
		[111456,111456,113456,444165,555641,666514]	(6,5324)
		[111456,122456,122456,444165,555641,666514]	(6,9400)
		[113356,123356,331165,331165,556631,665513]	(6,5328)
		[113356,123356,335561,335561,556613,661135]	(6,9335)
PB[6,136]	(A) $xy \approx x^4y$ $x^2y \approx xyx$ (B) $xy \approx x^3yx$	[111111,111111,113456,114536,115346,666666]	(6,14906)
		[111111,122456,122456,144526,155246,666666]	(6,14958)
		[111111,123356,135526,135526,152236,666666]	(6,15920)

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Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP
PB[6,137]	(Known basis) Lee and Zhang [4, Proposition 14.1]	[111111,111111,123156,444444,123656,666666] Note: Lee and Zhang [4]	(6,12399)
PB[6,138]	(A) $xy \approx x^4y$ $xy^2x \approx x^2y^2$ $xyzx \approx xzyx$	[111111,111111,123156,444444,125163,126135] [111156,111156,123356,124456,555561,666615] [111446,122456,133456,444661,444661,666114]	(6,14907) (6,14933) (6,15933)
PB[6,139]	(A) $xy \approx x^2y$ $xyz y \approx yxzy$ (B) $xy \approx x^2y$ $xyz^2 \approx yxz^2$	[111111,111111,123356,123356,123356,123556] [111156,111156,111156,113456,111156,151156] [111156,111156,111156,122456,111156,115156] [111156,111156,123356,123356,111156,111556] [111446,111446,111446,111446,113456,141446] [111446,111446,111446,111446,122456,114446] [111446,111446,111446,116446,126456,111446] [111446,111446,113456,111446,111446,141446] [111446,111446,113456,161446,161446,111446] [111446,111446,123446,111446,111446,111416] [111446,111446,123446,111466,111466,111466] [111446,122456,122456,111446,111446,114446] [111446,122456,122456,116446,116446,111446] [113336,113336,113366,123466,113366,113366] [113336,123356,113636,113636,113636,113636] [113336,123446,113366,113366,113366,113366]	(6,10348) (6,8218) (6,8225) (6,11285) (6,8224) (6,8229) (6,8236) (6,10985) (6,11117) (6,10979) (6,11127) (6,11397) (6,11405) (6,11120) (6,10977) (6,10978)
PB[6,140]	(A) $xy \approx x^5y$ $xyx \approx yx^2$ $xy^2x \approx x^2y^2$	[111111,111111,123456,124365,125643,126534] [111456,111456,123456,444165,555641,666514] [113356,123456,331165,331165,556631,665513] [113356,123456,335561,335561,556613,661135]	(6,9404) (6,5325) (6,5329) (6,9336)
PB[6,141]	(A) $xy \approx x^4y$ $xy^2x \approx x^2y^2$	[111111,111111,123456,124536,125346,666666]	(6,14910)

Continued on next page

Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP
PB[6,142]	(A) $x^3 \approx x^4$ $xyz \approx yxz$ $x^2y^3x \approx x^3y^3$ (B) $x^3 \approx x^4$ $xyz \approx yxz$ $x^3y^3 \approx x^2y^3x$	[111111,111112,111112,111234,111234,123456]	(6,5352)
PB[6,143]	(A) $x^2 \approx x^3$ $x^2y \approx xyx$ $x^2yz \approx x^2zy$ $xy^2x \approx y^2x^2$ (B) $x^2 \approx x^3$ $x^2y \approx xyx$ $x^2y^2 \approx yx^2y$ $xyza \approx xyaz$	[111111,111112,111113,111114,111211,113116] (6,1041) [111111,111112,111113,111114,111211,113316] (6,1045) [111111,111112,111113,111114,111212,113116] (6,1043) [111111,111112,111113,111114,111212,113316] (6,1046) [111111,111112,111113,111114,111213,113136] (6,1100) [111111,111112,111113,111114,111213,113336] (6,1102) [111111,111112,111113,111121,112115,113116] (6,1062) [111111,111112,111113,111122,112115,113116] (6,1063) [111111,111112,111113,111123,112215,113316] (6,1134)	
PB[6,144]	(A) $x^2 \approx x^3$ $x^2y \approx xyx$ $xyz^2 \approx xz^2y$ $xy^2x \approx y^2x^2$ (B) $x^2 \approx x^3$ $x^2y \approx xyx$ $x^2y^2 \approx yx^2y$ $xy^2z \approx xzy^2$	[111111,111112,111113,111114,111215,121456] (6,1118) [111111,111112,111113,111114,111215,122456] (6,1170) [111111,111112,111113,111114,112215,123356] (6,1193) [111111,111112,111113,112114,112115,123446] (6,1176)	
PB[6,145]	(A) $xyx \approx x^3y$ $xy^2 \approx xy^3$ (B) $xyx \approx x^3y$ $xy^2 \approx xy^3$ $xyxy \approx yx^2y$ $xyza \approx xyaz$	[111111,111112,111113,111114,111224,113116] (6,2676) [111111,111112,111113,111114,111224,113336] (6,2680) [111111,111112,111113,112114,112224,113116] (6,2702)	

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Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP
PB[6,146]	(A)	[111111,111112,111113,111114,111225,121456]	(6,2742)
	$x^3 \approx x^4$	[111111,111112,111113,111114,111225,122456]	(6,2754)
	$x^2y \approx xyx$	[111111,111112,111113,111114,112225,123356]	(6,2764)
	$xyz^2 \approx xz^2y$	[111111,111112,111113,111124,111125,121456]	(6,2741)
	$xy^2x \approx y^2x^2$	[111111,111112,111113,111124,111125,122456]	(6,2753)
	(B)	[111111,111112,111113,111214,111225,121456]	(6,5211)
	$x^3 \approx x^4$	[111111,111112,111113,111214,111225,122456]	(6,5222)
	$x^2y \approx xyx$	[111111,111112,111113,112224,112225,123446]	(6,5248)
	$x^2y^2 \approx yx^2y$	[111111,111112,111123,111124,111125,123356]	(6,2760)
	$xy^2z \approx xzy^2$	[111111,111112,111223,111224,111225,123446]	(6,5247)
	$x^2yz^2a \approx zyaxaz$	[111111,111112,112113,112224,112225,123446]	(6,9307)
	[111111,111112,112123,112224,112125,123436]	(6,9306)	
PB[6,147]	(A)	[111111,111112,111113,111121,112125,113136]	(6,2636)
	$x^2y \approx xyx$	[111111,111112,111113,111122,112125,113136]	(6,2637)
	$xy^2 \approx xy^3$	[111111,111112,111113,111123,112225,113336]	(6,2705)
	$x^2yz \approx x^2zy$		
PB[6,148]	(A)	[111111,111112,111113,111124,111245,121456]	(6,2808)
	$xyz \approx xzy$	[111111,111112,111113,111124,111245,122456]	(6,2810)
	$x^4 \approx x^5$	[111111,111112,111123,111124,112235,123356]	(6,2814)
	$xy^2x \approx y^2x^2$	[111111,111112,111223,112334,112335,123446]	(6,5269)
PB[6,149]	(A)	[111111,111112,111113,111124,112245,123456]	(6,2812)
	$x^2y \approx xyx$	[111111,111112,111123,111124,111245,123456]	(6,2812)
	$xy^2 \approx yxy$	[111111,111112,111123,111214,112235,123456]	(6,5358)
	$x^4 \approx x^5$	[111111,111112,111123,111224,112135,123456]	(6,5358)
PB[6,150]	(Known basis)	[111111,111112,111113,111214,112111,121456]	(6,2771)
	Lee and Zhang	[111111,111112,111113,111214,112111,122456]	(6,2772)
	[4, Proposition 15.1]	[111111,111112,111113,111214,112112,121456]	(6,2772)
		[111111,111112,111113,111214,112112,122456]	(6,2773)
		[111111,111112,111113,111224,112224,121456]	(6,5240)
		[111111,111112,111113,111224,112224,122456]	(6,5241)
		[111111,111112,111121,111224,111225,123446]	(6,5240)
		[111111,111112,111122,111224,111225,123446]	(6,5241)
		[111111,111112,112125,112224,112225,123556]	(6,9313)
		Note: Lee and Zhang [4]	

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Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP
PB[6,151]	(Known basis) Lee and Zhang [4, Proposition 12.8]	[111111,111112,111113,111214,113151,121416] [111111,111112,111131,111214,111151,123416] Note: Lee and Zhang [4]	(6,5625) (6,5625)
PB[6,152]	(Known basis) Lee and Zhang [4, Proposition 12.4]	[111111,111112,111113,111214,113153,121416] [111111,111112,111131,111214,111151,123436] Note: Lee and Zhang [4]	(6,5626) (6,5626)
PB[6,153]	(A) $x^3 \approx x^4$ $xyx \approx yx^2$ $xy^2x \approx x^2y^2$ (B) $x^3 \approx x^4$ $xyx \approx yx^2$ $x^2y^2 \approx xy^2x$	[111111,111112,111113,111214,113155,123456] [111111,111112,111113,111214,113355,123456] [111111,111112,111133,111344,123455,123456] [111111,111112,123333,123334,123345,123456] [111111,111122,111123,111244,123455,123456] [111111,111122,112233,112234,123455,123456]	(6,5627) (6,5628) (6,5663) (6,9624) (6,5671) (6,9469)
PB[6,154]	(A) $x^3 \approx x^4$ $xyz \approx xzy$ $xy^3x^2 \approx y^3x^3$ (B) $x^3 \approx x^4$ $xyz \approx xzy$ $x^3y^3 \approx yx^3y^2$	[111111,111112,111113,111224,111335,122446]	(6,5352)
PB[6,155]	(A) $x^2 \approx x^3$ $xyx \approx x^2yx$ $xy^2x \approx x^2y^2$ $xy^2x \approx y^2x^2$ $x^2yz^2 \approx x^2zyz$ (B) $x^2 \approx x^3$ $xyx \approx x^2yx$ $x^2y^2 \approx yx^2y$ $x^2yzy \approx x^2zy^2$ $xyzaxz \approx xzyzaxz$	[111111,111112,111113,112111,121455,121456] [111111,111112,111113,112111,122455,122456] [111111,111112,111113,112112,121455,121456] [111111,111112,111113,112112,122455,122456]	(6,3806) (6,3809) (6,3819) (6,3822)

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Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP	
PB[6,156]	(A)	[111111,111112,111113,112111,555555,111116]	(6,3810)	
	$x^2 \approx x^3$	[111111,111112,111113,112111,555555,555556]	(6,3816)	
	$x^2y \approx xyx$	[111111,111112,111113,112112,555555,111116]	(6,3823)	
	$xyz \approx xyz^2$	[111111,111112,111113,112112,555555,555556]	(6,3829)	
	$xyzy \approx xz^2y$	[111111,111112,111121,444444,444445,111116]	(6,6433)	
	(B)	[111111,111112,111121,444444,444445,444446]	(6,6438)	
	$x^2 \approx x^3$	[111111,111112,111122,444444,444445,111116]	(6,6440)	
	$x^2y \approx xyx$	[111111,111112,111122,444444,444445,444446]	(6,6445)	
	$xyz \approx xyz^2$	[111111,111113,111331,111441,111551,111661]	(6,3371)	
	$xy^2z \approx xzyz$	[111111,111122,111133,112122,111155,111166]	(6,3377)	
	PB[6,157]	(A)	[111111,111112,111113,112111,555555,111156]	(6,3811)
		$x^2 \approx x^3$	[111111,111112,111113,112112,555555,111156]	(6,3824)
$x^2y \approx xyx$		[111111,111112,111121,444444,444445,111446]	(6,6434)	
$xyz \approx xyz^2$		[111111,111112,111122,444444,444445,111446]	(6,6441)	
(B)				
$x^2 \approx x^3$				
PB[6,158]	(A)	[111111,111112,111113,112111,555555,121416]	(6,3812)	
	$x^2 \approx x^3$	[111111,111112,111113,112111,555555,122416]	(6,3814)	
	$xyx \approx x^2yx$	[111111,111112,111113,112112,555555,121416]	(6,3825)	
	$xy^2x \approx x^2y^2$	[111111,111112,111113,112112,555555,122416]	(6,3827)	
	$x^2yz^2 \approx x^2zyz$	[111111,111112,111121,444444,444445,123116]	(6,6435)	
	$xyxz^2 \approx x^2yz^2$	[111111,111112,111121,444444,444445,123126]	(6,6436)	
	(B)	[111111,111112,111122,444444,444445,123116]	(6,6442)	
	$x^2 \approx x^3$	[111111,111112,111122,444444,444445,123126]	(6,6443)	
	$xyx \approx x^2yx$	[111111,111113,111331,123441,123551,111661]	(6,3938)	
	$xyxzx \approx xzxyx$	[111111,111113,111331,123443,123553,111661]	(6,3941)	
	$xy^2z^2 \approx xzy^2z$	[111111,111122,111133,112122,121455,121466]	(6,3942)	
	$x^2yzaz \approx xzyzazx$	[111111,111122,111133,112122,122455,122466]	(6,3947)	
$xyzxay \approx xzyayx$				

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Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP
PB[6,159]	(Known basis) Lee and Zhang [4, Proposition 16.1]	[111111,111112,111113,112111,555555,121456] [111111,111112,111113,112111,555555,122456] [111111,111112,111113,112112,555555,121456] [111111,111112,111113,112112,555555,122456] [111111,111112,111121,444444,444445,123446] [111111,111112,111122,444444,444445,123446] Note: Lee and Zhang [4]	(6,3813) (6,3815) (6,3826) (6,3828) (6,6437) (6,6444)
PB[6,160]	(A) $x^2 \approx x^3$ $x^2y \approx xyx$ $xyz^2 \approx xz^2y$ (B) $x^2 \approx x^3$ $x^2y \approx xyx$ $xy^2z \approx xzy^2$	[111111,111112,111113,112114,555555,123416] [111111,111122,111133,112144,123455,123466]	(6,3839) (6,3950)
PB[6,161]	(A) $xy^2 \approx xy^3$ $x^2yz \approx x^2zy$ (B) $xy^2 \approx xy^3$ $xyxz \approx xzxy$ $xyza \approx xyaz$ $x^3y^2 \approx yx^2y^2$	[111111,111112,111113,112115,112225,113336]	(6,2708)
PB[6,162]	(Known basis) Lee and Zhang [4, Proposition 17.1]	[111111,111112,111113,112121,112123,121446] [111111,111112,111113,112122,112123,122446] Note: Lee and Zhang [4]	(6,2778) (6,2779)
PB[6,163]	(Known basis) Lee and Zhang [4, Proposition 18.1]	[111111,111112,111113,112141,113151,121416] Note: Lee and Zhang [4]	(6,3841)
PB[6,164]	(Known basis) Lee and Zhang [4, Proposition 19.1]	[111111,111112,111113,112141,113151,122446] Note: Lee and Zhang [4]	(6,3842)

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Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP
PB[6,165]	<p>(A)</p> $x^2 \approx x^3$ $xyx \approx x^2yx$ $xy^2x \approx yxyx$ $xyxzx \approx xzxyx$ $xy^2zx \approx xyxzy$ <p>(B)</p> $x^2 \approx x^3$ $xyx \approx x^2yx$ $xyxy \approx yx^2y$ $xyxzx \approx xzxyx$ $xyzxay \approx xyzzyax$ $xyzxay \approx xzyaxy$	[111111,111112,111113,112142,113153,121416]	(6,3842)
PB[6,166]	Inherently non-finitely based	[111111,111112,111113,112142,113153,122446] Note: L_3	(6,3843)
PB[6,167]	<p>(A)</p> $x^2y \approx x^2y^2$ $xyx \approx x^3y$ $xy^2 \approx xy^3$ $x^2yz \approx x^2zy$ <p>(B)</p> $xyx \approx x^3y$ $xyz \approx xyz^2$ $xy^2z \approx xzyz$	<p>[111111,111112,111113,112213,555555,111116] (6,5635)</p> <p>[111111,111112,111113,112213,555555,555556] (6,5637)</p> <p>[111111,111122,111133,112233,111155,111166] (6,5580)</p>	
PB[6,168]	<p>(A)</p> $x^2y \approx x^2y^2$ $xyx \approx x^3y$ $xy^2 \approx xy^3$ <p>(B)</p> $xyx \approx x^3y$ $xyz \approx xyz^2$	[111111,111112,111113,112213,555555,111156]	(6,5636)

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Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP
PB[6,169]	(A)	[111111,111112,111113,112214,555555,113316]	(6,5640)
	$xy^2 \approx xy^3$	[111111,111112,112123,444444,444445,445456]	(6,9589)
	$xyz \approx xzy$	[111111,111122,111133,112244,113355,113366]	(6,5604)
	(B)		
	$xy^2 \approx xy^3$		
	$xyz \approx xzy$		
PB[6,170]	(A)	[111111,111112,111113,112214,555555,113356]	(6,5641)
	$x^2y \approx xyx$		
	$xy^2 \approx xy^3$		
	(B)		
	$x^2y \approx xyx$		
	$xy^2 \approx xy^3$		
PB[6,171]	(A)	[111111,111112,111113,112214,555555,123416]	(6,5642)
	$x^3 \approx x^4$	[111111,111112,111123,444444,111125,123156]	(6,5648)
	$x^2y \approx xyx$	[111111,111112,112113,112214,555555,123416]	(6,9442)
	$xyz^2 \approx xz^2y$	[111111,111122,111133,112244,123455,123466]	(6,5675)
		[111111,111122,111233,111244,123455,123466]	(6,5676)
		[111111,111122,112133,112244,123455,123466]	(6,9461)
PB[6,172]	(A)	[111111,111112,111113,113411,121155,121156]	(6,7943)
	$x^2 \approx x^3$	[111111,111112,111113,113444,123454,113446]	(6,7972)
	$xyx \approx xyx^2$	[111111,111112,111113,122444,123454,122446]	(6,8020)
	$xy^2x \approx x^2y^2$	[111111,111112,111131,113441,123451,111116]	(6,8116)
	$xy^2x \approx y^2x^2$	[111111,111112,111131,113444,123454,113446]	(6,8119)
	$xyxzx \approx xyxzx$	[111111,111112,111131,123414,111151,123416]	(6,8120)
	$xyxz^2 \approx xzyxz$	[111111,111112,111133,113411,121155,121156]	(6,8169)
		[111111,111112,123333,123334,123453,123336]	(6,10897)
		[111111,111112,123333,123343,123353,123436]	(6,10906)
PB[6,173]	(A)	[111111,111112,111113,113411,555555,121116]	(6,7946)
	$x^2 \approx x^3$	[111111,111112,111113,113441,113551,121116]	(6,7962)
	$xyx \approx x^2yx$	[111111,111112,111131,444444,111151,123116]	(6,8131)
	$xy^2x \approx x^2y^2$	[111111,111112,111131,444444,123151,444446]	(6,8156)
	$xyxzx \approx xzyx$	[111111,111112,111331,111441,111551,123116]	(6,7974)
		[111111,111112,111331,123441,123551,111116]	(6,8249)
		[111111,111112,123111,444444,444445,444456]	(6,11025)
		[111111,111122,111133,113411,121155,121166]	(6,8252)

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Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP
PB[6,174]	(A)	[111111,111112,111113,113411,555555,121156]	(6,7947)
	$x^2 \approx x^3$	[111111,111112,111113,113451,555555,121116]	(6,7979)
	$xyx \approx x^2yx$	[111111,111112,111131,444444,111151,123416]	(6,8133)
	$xyxzx \approx xyzx$	[111111,111112,111131,444444,111451,123116]	(6,8139)
	$xy^2zx \approx x^2yzy$	[111111,111112,111131,444444,123454,444446]	(6,8158)
	(B)	[111111,111112,113111,444444,445444,121456]	(6,11066)
	$x^2 \approx x^3$	[111111,111112,113451,444444,444445,121116]	(6,11016)
	$xyx \approx x^2yx$	[111111,111112,123111,444444,444445,111456]	(6,11023)
	$xyzx \approx xyxzx$	[111111,111112,123451,444444,445444,111116]	(6,11085)
	$x^2yzy \approx xy^2zx$		
PB[6,175]	(A)	[111111,111112,111113,113413,121155,121156]	(6,7950)
	$x^2 \approx x^3$	[111111,111112,111131,113441,123452,111116]	(6,8117)
	$xyx \approx xyx^2$	[111111,111112,111131,123434,111151,123436]	(6,8121)
	$xyxy \approx xy^2x$	[111111,111112,111133,113433,121155,121156]	(6,8172)
	$xy^2x \approx yxyx$	[111111,111112,123333,123334,123454,123336]	(6,10898)
	$xyxzx \approx xyzx$	[111111,111112,123333,123343,123353,123446]	(6,10907)
	$xyzxz \approx xzyxz$		
	(B)		
	$x^2 \approx x^3$		
	$xyx \approx xyx^2$		
$xyxy \approx xy^2x$			
$xyzx \approx xyxzx$			
$xyzaxz \approx zyaxxz$			
PB[6,176]	(A)	[111111,111112,111113,113413,555555,121116]	(6,7953)
	$x^2 \approx x^3$	[111111,111112,111113,113443,113553,121116]	(6,7966)
	$xyx \approx x^2yx$	[111111,111112,111131,444444,111151,123136]	(6,8132)
	$xyxy \approx xy^2x$	[111111,111112,111131,444444,123152,444446]	(6,8157)
	$xyzx \approx xzyx$	[111111,111112,111331,111441,111551,123336]	(6,7980)
	$xyz^2y \approx xzyzy$	[111111,111112,111331,123442,123552,111116]	(6,8251)
		[111111,111112,123112,444444,444445,444456]	(6,11030)
		[111111,111122,111133,113433,121155,121166]	(6,8254)

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Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP
PB[6,177]	(A) $x^2 \approx x^3$ $xyx \approx x^2yx$ $xy^2zx \approx xyxzy$	$[111111,111112,111113,113413,555555,121156]$ $[111111,111112,111113,113453,555555,121116]$ $[111111,111112,111131,444444,111151,123436]$ $[111111,111112,111131,444444,111451,123136]$ $[111111,111112,123112,444444,444445,111456]$ $[111111,111112,123452,444444,445444,111116]$	(6,7954) (6,7984) (6,8134) (6,8140) (6,11028) (6,11086)
PB[6,178]	(A) $x^2 \approx x^3$ $xyx \approx x^2yx$ $x^2y^2 \approx xyxy$ $xy^2x \approx yxyx$ $xyzx \approx xzyx$ (B) $x^2 \approx x^3$ $xyx \approx x^2yx$ $x^2y^2 \approx yx^2y$ $xyzx \approx xzyx$ $x^2y^2z \approx xy^2xz$	$[111111,111112,111113,113451,113451,121116]$ $[111111,111112,111331,111451,111451,123116]$ $[111111,111112,111331,123451,123451,111116]$ $[111111,111122,111133,113411,121156,121156]$ $[111116,111126,111136,113416,121156,111116]$ $[111116,111126,111316,111416,123156,111116]$ $[111155,111255,111355,113455,111155,121156]$ $[111444,112444,113444,111444,111445,121456]$	(6,7974) (6,7962) (6,8252) (6,8249) (6,8131) (6,7946) (6,8156) (6,11025)
PB[6,179]	(A) $x^2 \approx x^3$ $xyx \approx x^2yx$ $xyxy \approx yx^2y$ $xyzx \approx xzyx$ (B) $x^2 \approx x^3$ $xyx \approx x^2yx$ $xyxy \approx yx^2y$ $xyzx \approx xzyx$	$[111111,111112,111113,113451,113453,121116]$ $[111111,111112,111331,123451,123452,111116]$	(6,7975) (6,8253)

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Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP
PB[6,180]	(A) $x^2 \approx x^4$ $xyx \approx x^3yx$ $xy^2x \approx x^2y^2$ $xyzx \approx xzyx$ $xy^2x \approx y^2x^2$	$[111111,111112,111113,113451,113541,121116]$ $[111111,111112,111331,111451,111541,123116]$ $[111111,111112,111331,123451,123541,111116]$ $[111111,111122,111133,113411,121156,121165]$ $[111116,111126,111136,113416,121156,666661]$ $[111116,111126,111316,111416,123156,666661]$ $[111155,111255,113155,121456,555511,556511]$ $[111155,111255,113156,121455,555511,556111]$ $[111155,111255,123155,111456,555511,556111]$ $[111155,111255,123156,111455,555511,556511]$ $[111444,121444,113456,444111,445111,464111]$ $[111444,121446,113454,444111,445111,446111]$	(6,6369) (6,6369) (6,6462) (6,6462) (6,4076) (6,4076) (6,4185) (6,4185) (6,4187) (6,4187) (6,4286) (6,4286)
PB[6,181]	(A) $x^2 \approx x^3$ $xyx \approx y^2x^2$ $xyzx \approx xzyx$	$[111111,111112,111113,113451,133451,111116]$	(6,7976)
PB[6,182]	(A) $x^2 \approx x^3$ $xyx \approx x^2yx$ $xyxy \approx yx^2y$ $xyzx \approx xzyx$ $xy^2xz \approx xyxyz$ (B) $x^2 \approx x^3$ $xyx \approx x^2yx$ $xyxy \approx yx^2y$ $xyzx \approx xzyx$ $xyxyz \approx xy^2xz$	$[111111,111112,111113,113453,113453,121116]$ $[111111,111112,111331,111451,111451,123336]$ $[111111,111112,111331,123452,123452,111116]$ $[111111,111122,111133,113433,121156,121156]$ $[111116,111126,111136,113436,121156,111116]$ $[111116,111126,111316,111416,123356,111116]$ $[111155,111255,111355,113455,111155,121256]$ $[111444,112444,113444,111444,111445,122456]$	(6,7980) (6,7966) (6,8254) (6,8251) (6,8132) (6,7953) (6,8157) (6,11030)
PB[6,183]	(A) $x^2 \approx x^4$ $xyx \approx x^3yx$ $xyxy \approx xy^2x$ $xyzx \approx xzyx$ $xy^2x \approx yxyx$	$[111111,111112,111113,113453,113543,121116]$ $[111111,111112,111331,111451,111541,123336]$ $[111111,111112,111331,123452,123542,111116]$ $[111111,111122,111133,113433,121156,121165]$ $[111116,111126,111136,113436,121156,666661]$ $[111116,111126,111316,111416,123356,666661]$ $[111155,111255,123255,111456,555511,556111]$ $[111155,111255,123256,111455,555511,556511]$	(6,6370) (6,6370) (6,6463) (6,6463) (6,4077) (6,4077) (6,4188) (6,4188)

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Table 1 – *Continued from previous page*

Id	Basis Proposal	Min.Lex	GAP
PB[6,184]	(A) $x^2 \approx x^3$ $xyx^2 \approx xyx$ $xyxz^2 \approx yxyz^2$	[111111,111112,111113,113453,133453,111116]	(6,7982)
PB[6,185]	(A) $x^2 \approx x^3$ $xyx \approx x^2yx$ $xy^2x \approx yxyx$ $xyz^2 \approx xzyz$ $xy^2xz \approx x^2y^2z$	[111111,111112,111113,113454,113454,113456] [111111,111112,111113,122454,122454,122456] [111111,111112,111333,121454,121454,121456] [111111,111112,123353,123354,123353,123356] [111111,111122,111133,113444,113456,113456] [111111,111122,111133,122444,122456,122456] [111111,111122,111333,121444,121456,121456] [111111,111122,123333,123344,123356,123356] [111116,111126,111136,113446,113456,111116] [111116,111126,111136,122446,122456,111116] [111116,111126,111336,121446,121456,111116] [111116,111126,123336,123346,123356,111116]	(6,7682) (6,8029) (6,7715) (6,10934) (6,7688) (6,8415) (6,7718) (6,11222) (6,7628) (6,8332) (6,7653) (6,11425)

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Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP
PB[6,186]	(A) $x^2 \approx x^4$ $xyx \approx x^3yx$ $xy^2x \approx x^2y^2$ $xyz^2 \approx xzyz$ $xy^2x \approx y^2x^2$	[111111,111112,111113,113454,113545,113456] [111111,111112,111113,122454,122545,122456] [111111,111112,111333,121454,121545,121456] [111111,111112,123353,123354,125535,123356] [111111,111112,123443,124334,124335,123446] [111111,111122,111133,113444,113456,113465] [111111,111122,111133,122444,122456,122465] [111111,111122,111333,121444,121456,121465] [111111,111122,123333,123344,123356,123365] [111116,111126,111136,113446,113456,666661] [111116,111126,111136,122446,122456,666661] [111116,111126,111336,121446,121456,666661] [111116,111126,123336,123346,123356,666661] [111155,111255,113356,113456,555511,555611] [111155,111255,123355,123455,555511,555611] [111155,111255,123355,123455,555511,556611] [111155,112255,113356,113456,555511,555611] [111155,122256,122356,122456,555511,555611] [111444,122446,123446,444111,445111,446111] [111444,122446,123446,444111,455111,446111] [111444,122455,123455,444111,445111,446111]	(6,6246) (6,6385) (6,6269) (6,6858) (6,7001) (6,6282) (6,6524) (6,6284) (6,9915) (6,4053) (6,4079) (6,4059) (6,6806) (6,4157) (6,4189) (6,4198) (6,4163) (6,6950) (6,4265) (6,4271) (6,4288)
PB[6,187]	(Known basis) Lee and Zhang [4, Proposition 17.5]	[111111,111112,111113,113454,133454,113456] [111111,111112,111113,113455,133455,133456] Note: Lee and Zhang [4]	(6,7987) (6,7991)
PB[6,188]	(Known basis) Lee and Zhang [4, Proposition 20.1]	[111111,111112,111121,123444,123445,123446] [111111,111112,111122,123444,123445,123446] Note: Lee and Zhang [4]	(6,6432) (6,6439)
PB[6,189]	(A) $xy \approx yx$ $x^5 \approx x^6$ (B) $xy \approx yx$ $x^5 \approx x^6$	[111111,111112,111123,111234,112345,123456]	(6,5370)

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Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP
PB[6,190]	(Known basis) Lee and Li [3, Chapter 8]	[111111,111112,111123,123434,111125,123456] Note: Lee and Li [3]	(6,5647)
PB[6,191]	(Known basis) Lee and Li [3, Chapter 9]	[111111,111112,111123,123444,123445,123456] Note: Lee and Li [3]	(6,6447)
PB[6,192]	(A) $xyz \approx xzy$ $x^4 \approx x^5$	[111111,111112,111123,444444,112135,123156] [111111,111122,111233,112344,123455,123466]	(6,5689) (6,5692)
PB[6,193]	(A) $x^2y \approx xyx$ $x^4 \approx x^5$	[111111,111112,111123,444444,112135,123456]	(6,5690)
PB[6,194]	(A) $x^3 \approx x^4$ $x^2y \approx xyx$ $xy^2x \approx y^2x^2$	[111111,111112,111133,111214,111155,123456] [111111,111112,111133,111234,111155,123456] [111111,111122,111133,111244,121455,123456] [111111,111122,111133,111244,122455,123456] [111111,111122,112233,112244,123355,123456] [111111,112222,113333,113334,113345,123456]	(6,5627) (6,5628) (6,5663) (6,5671) (6,9469) (6,9624)
PB[6,195]	(A) $x^2 \approx x^3$ $xyx \approx x^2yx$ $xy^2x \approx y^2x^2$ $xyxzx \approx xyzx$ $xy^2zx \approx x^2yzy$	[111111,111112,111133,121411,111155,113156] [111111,111112,111331,111441,123451,111116] [111111,111112,111331,121441,123451,111116] [111111,111112,111333,111444,121454,113446] [111111,111112,111333,111444,123454,111446] [111111,111122,111133,113411,111155,121156] [111111,111222,111223,111444,123454,111446] [111111,112222,113333,113334,113453,123336] [111111,112222,113333,113334,123453,113336]	(6,8116) (6,7943) (6,8169) (6,8119) (6,7972) (6,8120) (6,8020) (6,10906) (6,10897)
PB[6,196]	(A) $x^2 \approx x^3$ $xyx \approx x^2yx$ $xy^2x \approx yxyx$ $xyxzx \approx xyzx$ $xy^2zx \approx xyxzy$	[111111,111112,111133,121412,111155,113156] [111111,111112,111331,111441,123452,111116] [111111,111112,111331,121442,123452,111116] [111111,111122,111133,113433,111155,121156] [111111,112222,113333,113334,113454,123336] [111111,112222,113333,113334,123454,113336]	(6,8117) (6,7950) (6,8172) (6,8121) (6,10907) (6,10898)

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Id	Basis Proposal	Min.Lex	GAP
PB[6,197]	(A)	[111111,111112,111133,444444,121155,123156]	(6,8206)
	$x^2 \approx x^3$	[111111,111112,111333,121444,121555,123446]	(6,8264)
	$xyx \approx x^2yx$	[111111,111122,111333,121444,123455,123466]	(6,8486)
	$xyx \approx xyx^2$	[111111,111122,123113,444444,111155,123156]	(6,13340)
	$xy^2x \approx x^2y^2$	[111111,111122,123313,124414,111155,123356]	(6,13376)
	$xyxzx \approx xyzx$ $xyz^2y \approx xz^2y^2$	[111111,111222,123113,111444,111555,123446]	(6,13411)
[111111,111222,123133,111444,123455,123466]	(6,13610)		
PB[6,198]	(A)	[111111,111112,111141,444444,555555,111116]	(6,8218)
	$xy \approx xy^2$	[111111,111112,111141,444444,555555,444446]	(6,8224)
	$x^2yz \approx x^2zy$	[111111,111112,111142,444444,555555,111116]	(6,8225)
		[111111,111112,111142,444444,555555,444446]	(6,8229)
		[111111,111112,111144,444444,555555,555556]	(6,8236)
		[111111,111112,333333,333311,555555,555556]	(6,10977)
		[111111,111112,333333,333312,555555,555556]	(6,10978)
		[111111,111112,333333,333313,555555,111116]	(6,10979)
		[111111,111112,333333,333313,555555,333336]	(6,10985)
		[111111,111112,333333,335553,555555,111116]	(6,11127)
		[111111,111112,333333,335555,555555,333336]	(6,11120)
		[111111,111112,333333,335555,555555,555556]	(6,11117)
		[111111,111122,333333,444444,111155,111355]	(6,11285)
		[111111,111122,333333,444444,333166,333366]	(6,11397)
	[111111,111122,333333,444444,333355,443355]	(6,11405)	
	[111111,112222,113333,113335,115555,116666]	(6,10348)	
PB[6,199]	(A)	[111111,111112,111141,444444,555555,113416]	(6,8219)
	$x^2 \approx x^3$	[111111,111112,111141,444444,555555,113446]	(6,8220)
	$xyx \approx xyx^2$	[111111,111112,333333,333313,555555,113416]	(6,10980)
	$xyx \approx xy^2x$	[111111,111112,333333,333313,555555,113436]	(6,10981)
	$xyz^2 \approx xyzzy$	[111111,111112,333333,335555,555555,333456]	(6,11119)
		[111111,111112,333333,335555,555555,553456]	(6,11118)

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Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP
PB[6,200]	(A)	[111111,111112,111141,444444,555555,121116]	(6,8221)
	$x^2 \approx x^3$	[111111,111112,111142,444444,555555,122116]	(6,8226)
	$xyx \approx xyx^2$	[111111,111112,333333,333313,555555,121116]	(6,10982)
	$x^2yz \approx x^2zy$	[111111,111112,333333,335553,555555,121116]	(6,11128)
	$xyxy \approx xy^2x$	[111111,111122,333333,444444,121155,121355]	(6,11331)
	(B)	[111111,112222,123333,123335,125555,126666]	(6,11579)
PB[6,201]	(Known basis)	[111111,111112,111141,444444,555555,123416]	(6,8222)
	Lee and Zhang	[111111,111112,111141,444444,555555,123446]	(6,8223)
	[4, Proposition 21.1]	[111111,111112,111142,444444,555555,123416]	(6,8227)
		[111111,111112,111142,444444,555555,123446]	(6,8228)
		[111111,111112,333333,333313,555555,123416]	(6,10983)
		[111111,111112,333333,333313,555555,123436]	(6,10984)
Note: Lee and Zhang [4]			
PB[6,202]	(A)	[111111,111112,111143,444444,555555,121156]	(6,8232)
	$x^2 \approx x^3$	[111111,111112,111143,444444,555555,122156]	(6,8233)
	$xyx \approx xyx^2$	[111111,111112,333333,333314,555555,121156]	(6,10988)
	$xyzzy \approx xy^2z$	[111111,111112,333333,333314,555555,121256]	(6,10989)
	(B)	[111111,111112,333333,335554,555555,123336]	(6,11126)
	$x^2 \approx x^3$	[111111,111112,333333,335554,555555,125556]	(6,11124)
PB[6,203]	(A)	[111111,111112,111233,111234,123455,123456]	(6,5654)
	$x^3 \approx x^4$		
	$xyx \approx yx^2$		
	$x^2y^3x \approx x^3y^3$		
	(B)		
	$x^3 \approx x^4$		
$xyx \approx yx^2$			
$x^3y^3 \approx x^2y^3x$			

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Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP
PB[6,204]	(A) $x^2 \approx x^3$ $xyx \approx x^2yx$ $xyxy \approx xy^2x$ $xyzx \approx xzyx$	[111111,111112,111331,111441,111551,123136] [111111,111122,111133,113413,121155,121166]	(6,7975) (6,8253)
PB[6,205]	(A) $x^2 \approx x^3$ $xyx \approx x^2yx$ $xyx \approx xyx^2$ $xy^2x \approx yxyx$ $xyxzx \approx xyzx$ $xy^2xz \approx x^2y^2z$	[111111,111112,111333,121454,121454,123456] [111111,111122,111333,121444,123456,123456] [111111,111122,123413,123413,111155,123456] [111111,111222,123113,111454,111454,123456] [111111,111222,123133,111444,123456,123456] [111116,111126,111336,121446,123456,111116] [111116,111226,123136,111446,123456,111116]	(6,8264) (6,8486) (6,13411) (6,13376) (6,13610) (6,8206) (6,13340)
PB[6,206]	(A) $x^2 \approx x^4$ $xyx \approx x^3yx$ $x^2yx \approx xyx^2$ $xy^2x \approx x^2y^2$ $xy^2x \approx y^2x^2$	[111111,111112,111333,121454,121545,123456] [111111,111122,111333,121444,123456,123465] [111111,111122,123413,124314,111155,123456] [111111,111222,123113,111454,111545,123456] [111111,111222,123133,111444,123456,123465] [111116,111126,111336,121446,123456,666661] [111116,111226,123136,111446,123456,666661] [111155,111255,123355,123456,555511,556611] [111155,112255,113356,123456,555511,556611] [111155,121255,113356,123456,555511,566611] [111444,122446,123456,444111,455111,446111]	(6,6471) (6,6550) (6,11230) (6,11230) (6,11521) (6,4089) (6,8873) (6,4199) (6,4199) (6,9017) (6,4295)
PB[6,207]	(Known basis) Edmunds et al. [1, Theorem 3.2]	[111111,111112,112143,444444,555555,123456] Note: Edmunds et al. [1]	(6,9726)

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Table 1 – *Continued from previous page*

Id	Basis Proposal	Min.Lex	GAP
PB[6,208]	(A)	[111111,111112,113153,444444,113155,113456]	(6,12774)
	$xy \approx xy^2$	[111111,111112,113453,113454,555555,113456]	(6,12885)
	$x^2yzy \approx xyxzy$	[111111,111112,333333,333454,333455,113456]	(6,13136)
	(B)	[111111,111222,333333,111446,113456,111466]	(6,13664)
	$xy \approx xy^2$	[111111,111222,333333,113446,113456,113466]	(6,13685)
	$x^2yz \approx xyxzyz$	[111111,111222,333333,113456,333556,333656]	(6,13698)
		[111111,121226,333333,121246,123256,121266]	(6,14222)
		[111111,122256,122356,122456,122556,666666]	(6,14223)
		[111116,111126,113336,114446,113456,111166]	(6,12185)
		[111116,111126,113336,114446,113456,116666]	(6,12324)
		[111116,112226,113336,113456,115556,111616]	(6,12392)
		[111116,112226,113336,113456,115556,116666]	(6,12462)
		[111116,122226,122236,144446,122456,111166]	(6,14252)
		[111116,122226,122236,144446,122456,166666]	(6,14253)
		[111155,111255,333366,113456,111555,333666]	(6,14080)
	[111155,122255,123455,144455,115155,116155]	(6,12492)	

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Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP	
PB[6,209]	(A)	[111111,111112,113153,444444,113155,123456]	(6,12776)	
	$x^2 \approx x^3$	[111111,111112,113453,113454,555555,123456]	(6,12886)	
	$xyx \approx x^2yx$	[111111,111112,123153,444444,123155,123456]	(6,12967)	
	$xyx \approx xyx^2$	[111111,111112,123453,123454,555555,123456]	(6,13058)	
	$x^2y^2 \approx xyxy$	[111111,111112,333333,333454,333455,123456]	(6,13137)	
	$xyxzx \approx xyzx$	[111111,111222,333333,111446,123456,111466]	(6,13668)	
			[111111,111222,333333,113446,123456,113466]	(6,13689)
			[111111,111222,333333,121446,123456,121466]	(6,13716)
			[111111,111222,333333,123446,123456,123466]	(6,13726)
			[111111,111222,333333,123456,333556,333656]	(6,13736)
			[111111,121226,333333,121246,123456,121266]	(6,14262)
			[111111,122256,122356,123456,122556,666666]	(6,14263)
			[111116,111126,113336,114446,123456,111166]	(6,12776)
			[111116,111126,113336,114446,123456,116666]	(6,12886)
			[111116,111126,123336,124446,123456,111166]	(6,13668)
			[111116,111126,123336,124446,123456,116666]	(6,13689)
			[111116,112226,113336,114446,123456,111166]	(6,12967)
			[111116,112226,113336,114446,123456,116666]	(6,13058)
			[111116,112226,123336,123456,125556,111616]	(6,13716)
			[111116,112226,123336,123456,125556,116666]	(6,13726)
			[111116,122226,122236,144446,123456,111166]	(6,14262)
			[111116,122226,122236,144446,123456,166666]	(6,14263)
			[111155,111255,333366,123456,111555,333666]	(6,14152)
			[111155,122255,123456,144455,115155,116155]	(6,13137)
		[111155,122256,123456,144456,115155,116155]	(6,13736)	
PB[6,210]	(A)	[111111,111112,113451,444444,445134,121116]	(6,10837)	
	$x^2 \approx x^4$	[111111,111112,113453,444444,445135,123456]	(6,10842)	
	$xyx \approx x^3yx$	[111111,111122,113333,114444,123456,124365]	(6,11385)	
	$x^2y \approx x^2yx^2$	[111111,111122,333333,333344,123456,341265]	(6,9937)	
	(B)	[111111,111122,333333,444444,123456,124365]	(6,11396)	
	$x^2 \approx x^4$	[111111,111222,333333,113446,123456,331664]	(6,11459)	
	$x^2y \approx x^2yx^2$	[111111,112222,113333,114444,123456,124365]	(6,11392)	
	$xyx \approx x^3yx$	[111111,112222,123333,123456,125555,125634]	(6,11598)	
	$xyz^2ax \approx xyz^2azxz$	[111111,122256,122356,123456,555555,566612]	(6,8924)	
			[111111,122446,123456,644221,645221,666666]	(6,9065)

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Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP
PB[6,211]	(A)	[111111,111112,123151,444444,123151,111116]	(6,12949)
	$x^2 \approx x^3$	[111111,111112,123151,444444,123151,444446]	(6,12951)
	$xyx \approx x^2yx$	[111111,111122,123111,444444,111156,111156]	(6,13327)
	$xyx \approx xy^2x$	[111111,111122,123111,444444,444456,444456]	(6,13334)
	$x^2y^2 \approx xyxy$	[111111,111122,123311,124411,111156,111156]	(6,13371)
	$xyzx \approx xzyx$	[111111,111122,123411,123411,111155,111166]	(6,13402)
		[111116,111126,123316,124416,111156,111116]	(6,13327)
		[111116,111226,123116,111446,111556,111116]	(6,12949)
		[111155,112255,113355,114455,111155,121156]	(6,12951)
	[111444,112444,113444,111444,121455,121466]	(6,13334)	
PB[6,212]	(A)	[111111,111112,123151,444444,123151,111416]	(6,12950)
	$x^2 \approx x^3$	[111111,111112,123451,123451,555555,111116]	(6,13045)
	$xyx \approx x^2yx$	[111111,111112,123454,444444,123454,444446]	(6,13061)
	$xyx \approx xy^2x$	[111111,111122,123111,444444,111456,111456]	(6,13330)
	$x^2y^2z \approx xyxz$	[111111,111122,123411,444444,111156,111156]	(6,13407)
	[111111,111122,123444,444444,444456,444456]	(6,13438)	
PB[6,213]	(A)	[111111,111112,123151,444444,123152,111116]	(6,12952)
	$x^2 \approx x^3$	[111111,111112,123151,444444,123152,444446]	(6,12954)
	$xyx \approx x^2yx$	[111111,111122,123411,123422,111155,111166]	(6,13404)
	$xyzx \approx xzyx$		
	$xyzyz \approx xzyz$		
PB[6,214]	(A)	[111111,111112,123151,444444,123152,111416]	(6,12953)
	$x^2 \approx x^3$	[111111,111112,123451,123452,555555,111116]	(6,13047)
	$xyx \approx x^2yx$		
	$xyx \approx xy^2x$		
	$xyzxy \approx xyxzy$		

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Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP
PB[6,215]	(A)	[111111,111112,123151,444444,125131,111116]	(6,10949)
	$x^2 \approx x^4$	[111111,111112,123151,444444,125131,444446]	(6,10951)
	$xyx \approx x^3yx$	[111111,111122,123111,444444,111156,111165]	(6,11299)
	$xyx \approx xy^3x$	[111111,111122,123111,444444,444456,444465]	(6,11410)
	$xy^2x \approx x^2y^2$	[111111,111122,123311,124411,111156,111165]	(6,11228)
	$xyzx \approx xzyx$	[111111,111122,123411,124311,111155,111166]	(6,11227)
		[111116,111126,123316,124416,111156,666661]	(6,8856)
		[111116,111226,123116,111446,111556,666661]	(6,8863)
		[111155,121155,113356,114456,555511,565511]	(6,9004)
	[111155,121156,113355,114455,555511,566611]	(6,9009)	
PB[6,216]	(A)	[111111,111112,123151,444444,125131,111416]	(6,10950)
	$x^2 \approx x^4$	[111111,111112,123451,124351,555555,111116]	(6,10967)
	$xyx \approx x^3yx$	[111111,111112,123454,444444,125434,444446]	(6,10976)
	$xyx \approx xy^3x$	[111111,111122,123111,444444,111456,111465]	(6,11306)
	$xy^2x \approx x^2y^2$	[111111,111122,123411,444444,111156,111165]	(6,11300)
	[111111,111122,123444,444444,444456,444465]	(6,11412)	
PB[6,217]	(A)	[111111,111112,123152,444444,123152,111116]	(6,12958)
	$x^2 \approx x^3$	[111111,111112,123152,444444,123152,444446]	(6,12960)
	$xyx \approx x^2yx$	[111111,111122,123122,444444,111156,111156]	(6,13348)
	$xyxyz \approx xyxz$	[111111,111122,123122,444444,444456,444456]	(6,13355)
	$xyzyz \approx xzyz$	[111111,111122,123322,124422,111156,111156]	(6,13382)
	(B)	[111111,111122,123422,123422,111155,111166]	(6,13416)
	$x^2 \approx x^3$	[111116,111126,123326,124426,111156,111116]	(6,13348)
	$xyx \approx x^2yx$	[111116,111226,123226,111446,111556,111116]	(6,12958)
	$xyxz \approx xyxyz$	[111155,112255,113355,114455,111155,122256]	(6,12960)
	$xyzy \approx xzyzy$	[111444,112444,113444,111444,122455,122466]	(6,13355)
PB[6,218]	(A)	[111111,111112,123152,444444,123152,111416]	(6,12959)
	$x^2 \approx x^3$	[111111,111112,123452,123452,555555,111116]	(6,13051)
	$xyx \approx x^2yx$	[111111,111122,123122,444444,111456,111456]	(6,13351)
	$xyx \approx xy^2x$	[111111,111122,123422,444444,111156,111156]	(6,13419)
	$xyxyz \approx xyxz$		

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Id	Basis Proposal	Min.Lex	GAP
PB[6,219]	(A)	[111111,111112,123152,444444,125132,111116]	(6,10954)
	$x^2 \approx x^4$	[111111,111112,123152,444444,125132,444446]	(6,10956)
	$xyx \approx x^3yx$	[111111,111122,123122,444444,111156,111165]	(6,11301)
	$xyx \approx xy^3x$	[111111,111122,123122,444444,444456,444465]	(6,11411)
	$xyxy \approx xy^2x$	[111111,111122,123322,124422,111156,111165]	(6,11233)
	$xyz^2y \approx xzyzy$	[111111,111122,123422,124322,111155,111166]	(6,11232)
		[111116,111126,123326,124426,111156,666661]	(6,8858)
	[111116,111226,123226,111446,111556,666661]	(6,8865)	
PB[6,220]	(A)	[111111,111112,123152,444444,125132,111416]	(6,10955)
	$x^2 \approx x^4$	[111111,111112,123452,124352,555555,111116]	(6,10970)
	$xyx \approx x^3yx$	[111111,111122,123122,444444,111456,111465]	(6,11307)
	$xyx \approx xy^3x$	[111111,111122,123422,444444,111156,111165]	(6,11302)
	$x^2yx \approx xyx^2$		
	$xyxy \approx xy^2x$		
PB[6,221]	(A)	[111111,111112,123153,444444,123153,123156]	(6,12964)
	$x^2 \approx x^3$	[111111,111122,123133,444444,123156,123156]	(6,13363)
	$xyx \approx x^2yx$	[111111,111122,123333,124444,123356,123356]	(6,13398)
	$xyz^2 \approx xzyz$	[111111,111122,123433,123433,123455,123466]	(6,13425)
	$xy^2xz \approx x^2y^2z$	[111116,111126,123336,124446,123356,111116]	(6,13665)
		[111116,111226,123336,123446,123556,111116]	(6,13654)
PB[6,222]	(A)	[111111,111112,123153,444444,123153,123456]	(6,12965)
	$x^2 \approx x^3$	[111111,111112,123453,123453,555555,123456]	(6,13056)
	$xyx \approx x^2yx$	[111111,111122,123133,444444,123456,123456]	(6,13366)
	$xyx \approx xyx^2$	[111111,111122,123333,124444,123456,123456]	(6,13401)
	$xyxzx \approx xyzx$	[111111,111122,123433,444444,123456,123456]	(6,13433)
	$xy^2xz \approx x^2y^2z$	[111116,111126,123336,124446,123456,111116]	(6,13666)
	(B)		
	$x^2 \approx x^3$		
	$xyx \approx x^2yx$		
	$xyx \approx xyx^2$		
	$xyzx \approx xyxzx$		
$x^2y^2z \approx xy^2xz$			

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Id	Basis Proposal	Min.Lex	GAP
PB[6,223]	(A)	[111111,111112,123153,444444,125135,123156]	(6,10959)
	$x^2 \approx x^4$	[111111,111122,123133,444444,123156,123165]	(6,11370)
	$xyx \approx x^3yx$	[111111,111122,123333,124444,123356,123365]	(6,11375)
	$xy^2x \approx x^2y^2$	[111111,111122,123433,124344,123455,123466]	(6,11236)
	$xyz^2 \approx xzyz$	[111116,111126,123336,124446,123356,666661]	(6,8861)
		[111116,111226,123336,123446,123556,666661]	(6,8876)
		[111155,122256,123256,144456,555511,556511]	(6,9007)
	[111155,122256,123356,124456,555511,556611]	(6,9019)	
PB[6,224]	(A)	[111111,111112,123153,444444,125135,123456]	(6,10960)
	$x^2 \approx x^4$	[111111,111112,123453,124354,555555,123456]	(6,10973)
	$xyx \approx x^3yx$	[111111,111122,123133,444444,123456,123465]	(6,11386)
	$x^2yx \approx xyx^2$	[111111,111122,123333,124444,123456,123465]	(6,11388)
	$xy^2x \approx x^2y^2$	[111111,111122,123433,444444,123456,123465]	(6,11391)
		[111116,111126,123336,124446,123456,666661]	(6,8862)
	[111155,122256,123456,144456,555511,556511]	(6,9008)	
PB[6,225]	(A)	[111111,111112,123451,124531,125341,111116]	(6,14914)
	$x^2 \approx x^5$	[111111,111222,123111,111456,111564,111645]	(6,14914)
	$xyx \approx y^4x^2$	[111156,111256,123156,111456,555561,666615]	(6,14937)
	$xy^2x \approx x^2y^2$	[111446,121446,113456,444661,454661,666114]	(6,15924)
PB[6,226]	(A)	[111111,111112,123452,124532,125342,111116]	(6,14915)
	$x^2 \approx x^5$	[111111,111222,123222,111456,111564,111645]	(6,14915)
	$xyx \approx y^3xyx$ $xyxy \approx xy^2x$	[111156,111256,123256,111456,555561,666615]	(6,14938)
PB[6,227]	(A)	[111111,111112,123453,124534,125345,123456]	(6,14916)
	$x^2 \approx x^5$	[111111,111222,123333,123456,123564,123645]	(6,14919)
	$xyx \approx yx^2$	[111156,111256,123356,123456,555561,666615]	(6,14939)
	$xy^2x \approx x^2y^2$	[111446,122456,123456,444661,445661,666114]	(6,15929)
PB[6,228]	(A)	[111111,111113,111133,111144,111455,111466]	(6,3339)
	$x^2 \approx x^3$	[111111,111122,111124,111144,122255,122266]	(6,3889)
	$x^2y \approx xyx$	[111111,111122,111124,111144,122255,144466]	(6,3930)
	$x^2yz \approx x^2zy$	[111111,111122,111124,111144,144455,122266]	(6,3932)
PB[6,229]	(Known basis) Lee and Zhang [4, Proposition 20.7]	[111111,111113,111133,111344,123455,123466] Note: Lee and Zhang [4]	(6,5661)

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Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP
PB[6,230]	(Known basis) Lee [2, Proposition 5.1]	[111111,111113,111133,123411,111155,111166] Note: Lee [2]	(6,7976)
PB[6,231]	(A) $x^2 \approx x^3$ $xyx \approx x^2yx$ $x^2yzy \approx x^2zyz$	[111111,111113,111133,123433,111155,111166]	(6,7982)
PB[6,232]	(Known basis) Lee and Zhang [4, Proposition 22.1]	[111111,111113,111133,123444,123455,123466] Note: Lee and Zhang [4]	(6,8276)
PB[6,233]	(Known basis) Lee and Zhang [4, Proposition 22.5]	[111111,111113,111133,444444,123455,123466] Note: Lee and Zhang [4]	(6,8281)
PB[6,234]	(A) $x^2 \approx x^3$ $xyx \approx xyx^2$ $xy^2x \approx x^2y^2$ $xy^2x \approx y^2x^2$ $x^2yz^2 \approx xyxz^2$	[111111,111113,111331,111441,123451,111661] [111111,111113,111331,111441,123453,111661] [111111,111122,111133,112122,111155,121456] [111111,111122,111133,112122,111155,122456]	(6,3806) (6,3819) (6,3809) (6,3822)
PB[6,235]	(A) $x^2 \approx x^3$ $x^2y \approx yxy$ $xyxz \approx x^2yz$	[111111,111113,111331,111451,111451,111661] [111111,111122,111133,112122,111156,111156] [111116,111126,111136,112116,111156,111116] [111116,111126,111136,112126,111156,111116] [111155,111255,111355,111455,111155,112155] [111155,111255,111355,111455,111155,112255]	(6,3370) (6,3376) (6,3368) (6,3374) (6,6175) (6,6176)
PB[6,236]	(A) $x^2 \approx x^4$ $x^2y \approx yxy$ $xyz \approx xyz^3$ $xyx \approx y^3x^2$	[111111,111113,111331,111451,111541,111661] [111111,111122,111133,112122,111156,111165] [111116,111126,111136,112116,111156,666661] [111116,111126,111136,112126,111156,666661] [111444,111445,113444,444111,445111,446111] [111444,112444,113444,444111,444112,446111] [111444,112444,113444,444111,445111,454111] [111444,112444,113444,444111,445111,455111]	(6,2960) (6,2962) (6,1237) (6,1238) (6,1323) (6,1319) (6,1349) (6,1351)

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Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP
PB[6,237]	(A) $x^2 \approx x^3$ $xyx \approx x^2yx$ $xy^2x \approx yxyx$ $x^2yz^2 \approx x^2zyz$ $xyxz^2 \approx x^2yz^2$	[111111,111113,111331,123451,123451,111661] [111111,111113,111331,123453,123453,111661] [111111,111122,111133,112122,121456,121456] [111111,111122,111133,112122,122456,122456] [111116,111126,111136,112116,121456,111116] [111116,111126,111136,112116,122456,111116] [111116,111126,111136,112126,121456,111116] [111116,111126,111136,112126,122456,111116] [111155,111255,111355,113456,111155,131155] [111155,111255,111355,113456,111155,131355] [111155,111255,111355,122456,111155,112155] [111155,111255,111355,122456,111155,112255]	(6,3938) (6,3942) (6,3941) (6,3947) (6,3812) (6,3825) (6,3814) (6,3827) (6,6435) (6,6436) (6,6442) (6,6443)
PB[6,238]	(A) $x^2 \approx x^4$ $xyx \approx x^3yx$ $xy^2x \approx x^2y^2$ $xy^2x \approx y^2x^2$ $x^2yz^2 \approx x^2zyz$	[111111,111113,111331,123451,123541,111661] [111111,111113,111331,123453,123543,111661] [111111,111122,111133,112122,121456,121465] [111111,111122,111133,112122,122456,122465] [111116,111126,111136,112116,121456,666661] [111116,111126,111136,112116,122456,666661] [111116,111126,111136,112126,121456,666661] [111116,111126,111136,112126,122456,666661] [111444,111445,123454,444111,445111,446111] [111444,111445,123455,444111,445111,446111] [111444,112444,113456,444111,445111,454111] [111444,112444,113456,444111,445111,455111] [111444,112444,123446,444111,445111,444121]	(6,3045) (6,3047) (6,3047) (6,3049) (6,1259) (6,1260) (6,1260) (6,1261) (6,1350) (6,1352) (6,1350) (6,1352) (6,1347)
PB[6,239]	(A) $x^2 \approx x^3$ $xyx \approx x^2yx$ $x^2yz^2 \approx xyzxz$ $xy^2zx \approx x^2zyz$	[111111,111113,111333,111444,123454,111666] [111111,111133,111333,111444,111555,123556]	(6,7987) (6,7991)
PB[6,240]	(A) $x^2y \approx x^2yz$ $xyx \approx xy^2$ $xy^2 \approx xy^2z$	[111111,111113,333333,111235,555555,666666]	(6,9727)

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Id	Basis Proposal	Min.Lex	GAP
PB[6,241]	(A) $xy \approx xy^2$ $xyz \approx xyz$	[111111,111113,333333,111451,111451,666666] [111111,111113,333333,333453,333453,666666] [111111,111333,333333,444444,444456,444456] [111111,121126,333333,444444,121326,121126] [111116,122226,122246,144446,155556,111116]	(6,13171) (6,13196) (6,13777) (6,14465) (6,14271)
PB[6,242]	(A) $xy \approx xyx^2$ $x^2yz \approx x^2zy$	[111111,111113,333333,111451,111541,666666] [111111,111113,333333,333453,333543,666666] [111111,111333,333333,444444,444456,444465] [111111,121126,333333,444444,121326,161162] [111111,121155,333333,444444,151122,151322] [111116,122226,122246,144446,155556,666661]	(6,11162) (6,11170) (6,11602) (6,8932) (6,9073) (6,11782)
PB[6,243]	(A) $xy \approx xyx$	[111111,111113,333333,111451,555555,666666] [111111,111113,333333,111455,555555,666666] [111111,111113,333333,333453,555555,666666] [111111,111113,333333,333455,555555,666666] [111111,111333,333333,444444,444456,666666] [111111,121126,333333,444444,121326,666666] [111111,122226,122246,144446,155556,666666]	(6,13172) (6,13173) (6,13197) (6,13198) (6,13778) (6,14537) (6,14270)
PB[6,244]	(A) $x^2 \approx x^3$ $xyx \approx xyx^2$ $xy^2z \approx xyxz$	[111111,111113,333333,123451,123451,666666] [111111,111113,333333,123453,123453,666666]	(6,13184) (6,13188)
PB[6,245]	(Known basis) Lee and Zhang [4, Proposition 22.9]	[111111,111113,333333,123451,123453,666666] Note: Lee and Zhang [4]	(6,13185)
PB[6,246]	(Known basis) Lee and Zhang [4, Proposition 23.1]	[111111,111113,333333,123451,123541,666666] [111111,111113,333333,123453,123543,666666] Note: Lee and Zhang [4]	(6,11165) (6,11166)
PB[6,247]	(A) $x^2 \approx x^3$ $xyx \approx xyx^2$ $x^2y^2 \approx xyxy$ $x^2yz \approx x^2zy$	[111111,111122,111133,111144,111455,112455] [111111,111122,111133,111144,122255,122355] [111111,111122,111133,112144,113155,113255]	(6,2980) (6,3032) (6,2986)

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Id	Basis Proposal	Min.Lex	GAP
PB[6,248]	(A)	[111111,111122,111133,111144,113456,114365]	(6,3008)
	$x^2 \approx x^4$	[111111,111122,111133,111144,122456,144265]	(6,3040)
	$xyx \approx x^3yx$	[111111,111122,111134,111143,113456,113465]	(6,3006)
	$xyz^2 \approx xz^2y$ $xy^2x \approx y^2x^2$		
PB[6,249]	(A)	[111111,111122,111133,111244,121456,121456]	(6,5659)
	$x^3 \approx x^4$	[111111,111122,111133,111244,122456,122456]	(6,5668)
	$xyxz \approx x^2yz$	[111111,111122,112233,112244,123356,123356]	(6,9466)
	$xy^2x \approx yxyx$	[111116,111126,111136,111246,121456,111116]	(6,5613)
	$xyzx \approx xzyx$	[111116,111126,111136,111246,122456,111116]	(6,5621)
		[111116,111126,112236,112246,123356,111116]	(6,9450)
PB[6,250]	(A)	[111111,111122,111133,111244,121456,121465]	(6,5453)
	$x^3 \approx x^5$	[111111,111122,111133,111244,122456,122465]	(6,5457)
	$xyz \approx xzy$	[111111,111122,112233,112244,123356,123365]	(6,9383)
	$xy^2x \approx y^2x^2$	[111116,111126,111136,111246,121456,666661]	(6,2856)
	(B)	[111116,111126,111136,111246,122456,666661]	(6,2858)
	$xyz \approx xzy$	[111116,111126,112236,112246,123356,666661]	(6,5305)
	$x^2y^2 \approx yx^2y$	[111155,111255,111355,113456,555511,555613]	(6,2872)
	$x^3 \approx x^5$	[111155,111255,111355,122456,555511,555612]	(6,2874)
	$xyz \approx xzy$	[111155,111255,112355,123455,555511,555611]	(6,2881)
	$x^2y^2 \approx yx^2y$	[111444,112444,123446,444111,445111,446112]	(6,2894)
	$x^3 \approx x^5$	[111444,112444,123455,444111,445122,446122]	(6,5319)
	PB[6,251]	(A)	[111111,111122,111133,111244,121456,122456]
	$x^3 \approx x^4$		
	$x^2yx \approx xyx^2$		
	$xyxy \approx x^2y^2$		
	$xy^2x \approx yxyx$		

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Id	Basis Proposal	Min.Lex	GAP
PB[6,252]	(A) $x^2 \approx x^3$ $x^2y \approx xyx$ $xyz \approx xyz^2$ $x^2yz \approx x^2zy$ (B) $x^2 \approx x^3$ $x^2y \approx xyx$ $xyz \approx xyz^2$ $xyza \approx xyaz$	[111111,111122,111133,112112,111155,111166]	(6,3372)
PB[6,253]	(A) $x^2 \approx x^3$ $xyx \approx x^2yx$ $xyx \approx xyx^2$ $xy^2x \approx x^2y^2$ $xy^2x \approx y^2x^2$ (B) $x^2 \approx x^3$ $xyx \approx x^2yx$ $xyx \approx xyx^2$ $x^2y^2 \approx xyxy$ $xyzxay \approx yxzxay$ $xyzaxz \approx xyzazx$	[111111,111122,111133,112114,121455,123456] [111111,111122,111133,112114,122455,123456] [111111,111122,111133,112124,121455,123456] [111111,111122,111133,112124,122455,123456]	(6,3944) (6,3945) (6,3945) (6,3948)
PB[6,254]	(A) $x^2 \approx x^3$ $xyx \approx yx^2$ $xyxz \approx x^2yz$ (B) $x^2 \approx x^3$ $xyx \approx yx^2$ $x^2yz \approx xyxz$	[111111,111122,111133,112144,123456,123456] [111116,111126,111136,112146,123456,111116]	(6,3950) (6,3839)

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Id	Basis Proposal	Min.Lex	GAP
PB[6,255]	(A) $x^2 \approx x^4$ $x^2y \approx xyx$ $xy^2 \approx yxy$ (B) $x^2 \approx x^4$ $x^2y \approx xyx$ $x^2y \approx yx^2$	[111111,111122,111133,112144,123456,123465] [111116,111126,111136,112146,123456,666661] [111444,112444,123456,444111,445111,446121] [111444,112444,123456,444111,445111,456111] [111444,112445,123456,444111,445111,446111]	(6,3051) (6,1262) (6,1348) (6,1354) (6,1354)
PB[6,256]	(A) $x^2y \approx x^2y^2$ $xyx \approx xyx^2$ $xy^2 \approx xy^3$ $x^3y \approx x^2yx$ (B) $xyz \approx xyz^2$ $x^3y \approx x^2yx$ $x^3y \approx yx^2y$	[111111,111122,111133,112233,111155,112255]	(6,5441)
PB[6,257]	(A) $x^2y \approx x^2y^2$ $xy^2 \approx xy^3$ $xyx \approx y^3x$ $xyzx \approx xzyx$ (B) $xyz \approx xyz^2$ $xyxz \approx yxyz$	[111111,111122,111133,112233,111156,111156] [111116,111126,111136,112236,111156,111116]	(6,5579) (6,5577)
PB[6,258]	(A) $x^2y \approx x^2y^3$ $xyx \approx x^4y$ $xy^2 \approx xy^4$ $xyx \approx y^3x^2$	[111111,111122,111133,112233,111156,111165] [111116,111126,111136,112236,111156,666661] [111444,112444,113444,444111,445111,445122]	(6,5427) (6,2852) (6,2890)
PB[6,259]	(A) $xy^2 \approx xy^3$ $x^3y \approx x^2yx$ $xyx^2 \approx x^3y$	[111111,111122,111133,112234,111155,113356]	(6,5595)

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Id	Basis Proposal	Min.Lex	GAP
PB[6,260]	(A) $x^3 \approx x^4$ $x^3y \approx x^2yx$ $xyx^2 \approx x^3y$	[111111,111122,111133,112234,111155,123456]	(6,5647)
PB[6,261]	(A) $x^3 \approx x^4$ $x^2y \approx xyx$ $xy^3x^2 \approx y^3x^3$	[111111,111122,111133,112244,113355,123456]	(6,5654)
PB[6,262]	(A) $xy^2 \approx xy^3$ $xyxz \approx x^2yz$	[111111,111122,111133,112244,113356,113356] [111116,111126,111136,112246,113356,111116]	(6,5603) (6,5596)
PB[6,263]	(A) $xy^2 \approx xy^4$ $xyz \approx xzy$	[111111,111122,111133,112244,113356,113365] [111116,111126,111136,112246,113356,666661] [111444,112444,113455,444111,445111,446122]	(6,5449) (6,2854) (6,2892)
PB[6,264]	(A) $x^3 \approx x^4$ $xyx \approx yx^2$ $xyxz \approx x^2yz$	[111111,111122,111133,112244,123456,123456] [111111,111122,111233,111244,123456,123456] [111111,111122,112133,112244,123456,123456] [111116,111126,111136,112246,123456,111116] [111116,111126,111236,111246,123456,111116] [111116,111126,112136,112246,123456,111116]	(6,5676) (6,5675) (6,9461) (6,5648) (6,5642) (6,9442)
PB[6,265]	(A) $x^3 \approx x^5$ $x^2y \approx xyx$ $xy^2 \approx yxy$ (B) $x^3 \approx x^5$ $x^2y \approx xyx$ $x^2y \approx yx^2$	[111111,111122,111133,112244,123456,123465] [111111,111122,111233,111244,123456,123465] [111111,111122,112133,112244,123456,123465] [111116,111126,111136,112246,123456,666661] [111116,111126,111236,111246,123456,666661] [111116,111126,112136,112246,123456,666661] [111444,112444,123456,444111,445111,446122] [111444,112444,123456,444111,445112,446112] [111444,112444,123456,444111,445121,446122]	(6,5461) (6,5461) (6,9379) (6,2860) (6,2860) (6,5303) (6,2896) (6,2896) (6,5317)
PB[6,266]	(A) $x^2 \approx x^3$ $xyx \approx xyx^2$ $x^2y \approx xy^2x$ $x^2yz \approx x^2zy$	[111111,111122,111133,444444,111155,112155] [111111,111122,333333,333344,111155,111255] [111111,111222,111333,111444,111555,112444]	(6,6510) (6,9924) (6,6169)

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Id	Basis Proposal	Min.Lex	GAP
PB[6,267]	(A) $x^2 \approx x^3$ $xyx \approx xyx^2$ $x^2y \approx xy^2x$	[111111,111122,111133,444444,111455,112455]	(6,6512)
PB[6,268]	(Known basis) Lee and Zhang [4, Proposition 23.9]	[111111,111122,111133,444444,113156,133156] [111111,111122,333333,333344,121156,121256] Note: Lee and Zhang [4]	(6,8448) (6,11262)
PB[6,269]	(Known basis) Lee and Zhang [4, Proposition 24.1]	[111111,111122,111133,444444,113456,133456] Note: Lee and Zhang [4]	(6,8453)
PB[6,270]	(A) $x^2 \approx x^4$ $xyx \approx x^3yx$ $xyz^2 \approx xz^2y$	[111111,111122,111133,444444,123156,132165] [111111,111123,111132,444444,123156,123165]	(6,6536) (6,6602)
PB[6,271]	(Known basis) Lee and Li [3, Chapter 10]	[111111,111122,111133,444444,123456,132465] [111111,111123,111132,444444,123456,123465] Note: Lee and Li [3]	(6,6543) (6,6605)
PB[6,272]	(A) $xyz \approx yxz$ $x^4 \approx x^5$	[111111,111122,111233,112344,123456,123456] [111116,111126,111236,112346,123456,111116]	(6,5692) (6,5689)
PB[6,273]	(A) $xy \approx yx$ $x^4 \approx x^6$	[111111,111122,111233,112344,123456,123465] [111116,111126,111236,112346,123456,666661] [111444,112445,123456,444111,445111,456112]	(6,5471) (6,2863) (6,2899)
PB[6,274]	(A) $x^3 \approx x^4$ $xyz \approx x^2yz$ $xyzx \approx xzyx$ (B) $x^3 \approx x^4$ $x^2yx \approx x^3yx$ $xyza \approx xzya$	[111111,111122,112133,444444,123156,123156] [111116,111226,112336,123446,123556,111116]	(6,9736) (6,9736)
PB[6,275]	(A) $x^3 \approx x^5$ $xyz \approx xzy$	[111111,111122,112133,444444,123156,123165] [111116,111226,112336,123446,123556,666661] [111155,112255,123356,124456,555511,556612]	(6,9595) (6,5740) (6,5754)

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Id	Basis Proposal	Min.Lex	GAP
PB[6,276]	(Known basis) Lee and Zhang [4, Proposition 24.5]	[111111,111122,112133,444444,123456,123456] Note: Lee and Zhang [4]	(6,9739)
PB[6,277]	(A) $x^3 \approx x^5$ $x^2y \approx xyx$	[111111,111122,112133,444444,123456,123465]	(6,9597)
PB[6,278]	(Known basis) Lee and Li [3, Chapter 11]	[111111,111122,112233,112244,123456,124365] [111111,111122,112234,112243,123456,123465] Note: Lee and Li [3]	(6,9386) (6,9386)
PB[6,279]	(A) $xy \approx xy^3$ $xyx \approx y^2xyx$	[111111,111122,113434,113443,113456,113465] [111111,112222,113355,113456,113553,113654] [111155,111255,113156,111455,115151,116153] [111155,111255,113356,113456,115551,116653] [111155,122256,122356,122456,155551,166652] [111156,112256,113456,114356,115656,116556] [111444,112445,113446,114441,115442,116443] [111444,122455,123455,144411,155422,156422]	(6,10409) (6,10410) (6,10203) (6,10218) (6,8921) (6,10411) (6,9882) (6,9062)
PB[6,280]	(A) $x^2 \approx x^4$ $xy^2 \approx y^2xy^2$ $xyx \approx xyx^3$	[111111,111122,113434,113443,123456,123465] [111111,111122,123434,123443,123456,123465] [111111,112222,123355,123456,123553,123654] [111155,111255,113156,121455,115151,116153] [111155,111255,113356,123456,115551,116653] [111155,111255,123356,123456,115551,126653] [111155,122256,122356,123456,155551,166652] [111156,112256,123456,124356,115656,116556] [111444,112445,123456,114441,115442,126453] [111444,122455,123456,144411,155422,156422]	(6,11385) (6,11392) (6,11598) (6,10837) (6,10842) (6,11459) (6,8924) (6,11396) (6,9937) (6,9065)
PB[6,281]	(Known basis) Lee and Zhang [4, Proposition 25.5]	[111111,111122,123111,444444,111456,444165] Note: Lee and Zhang [4]	(6,11311)
PB[6,282]	(Known basis) Lee and Zhang [4, Proposition 25.2]	[111111,111122,123122,444444,111456,444165] Note: Lee and Zhang [4]	(6,11312)

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Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP
PB[6,283]	(A)	[111111,111122,123123,444444,111155,123156]	(6,13356)
	$x^2 \approx x^3$	[111111,111122,123323,124424,111155,123356]	(6,13385)
	$xyx \approx x^2yx$	[111111,111222,123223,111444,111555,123446]	(6,13420)
	$xyx \approx xyx^2$	[111111,111222,123233,111444,123455,123466]	(6,13612)
	$xyxy \approx xy^2x$		
	$xyz^2y \approx xzyzy$		
PB[6,284]	(A)	[111111,111122,123123,444444,111155,123456]	(6,13357)
	$x^2 \approx x^3$	[111111,111122,123123,444444,111455,123456]	(6,13358)
	$xyx \approx x^2yx$	[111111,111122,123123,444444,444455,123456]	(6,13359)
	$xyx \approx xyx^2$	[111111,111122,123323,124424,111155,123456]	(6,13386)
	$xyxy \approx xy^2x$	[111111,111122,123423,444444,111155,123456]	(6,13422)
		[111111,111222,123123,111444,111555,123456]	(6,13413)
		[111111,111222,123223,111444,111555,123456]	(6,13421)
PB[6,285]	(Known basis) Lee and Li [3, Chapter 12]	[111111,111122,123333,124444,123456,124365] Note: Lee and Li [3]	(6,11395)
PB[6,286]	(A)	[111111,111122,123411,123411,111156,111165]	(6,11227)
	$x^2 \approx x^4$	[111111,111122,123411,124311,111156,111156]	(6,11228)
	$xyx \approx y^3x^2$	[111116,111126,123416,123416,111156,666661]	(6,8863)
	$xyzx \approx xzyx$	[111116,111126,123416,124316,111156,111116]	(6,11299)
		[111116,111226,123116,111456,111456,666661]	(6,8856)
		[111116,111226,123116,111456,111546,111116]	(6,10949)
		[111155,112255,113455,114355,111155,121156]	(6,10951)
		[111155,121155,113456,113456,555511,565511]	(6,9009)
		[111155,121156,113455,113455,555511,556611]	(6,9004)
		[111444,112444,113444,111444,121456,121465]	(6,11410)
PB[6,287]	(A)	[111111,111122,123411,123412,111155,111166]	(6,13403)
	$x^2 \approx x^3$	[111111,111122,123412,123421,111155,111166]	(6,13408)
	$xyx \approx x^2yx$	[111111,111122,123412,123422,111155,111166]	(6,13409)
	$xyx \approx xy^2x$		
	$xyzx \approx xzyx$		
PB[6,288]	(A)	[111111,111122,123411,123422,111156,111165]	(6,11229)
	$x^2 \approx x^4$	[111116,111126,123416,123426,111156,666661]	(6,8864)
	$xyx \approx y^2xyx$		
	$xyzx \approx xzyx$		

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Id	Basis Proposal	Min.Lex	GAP
PB[6,289]	(A) $x^2 \approx x^3$ $xyx \approx x^2yx$ $xyzx \approx xzyx$ $xyxyz \approx xyxz$	[111111,111122,123412,123412,111155,111166] [111116,111226,123126,111446,111556,111116] [111155,112255,113355,114455,111155,121256]	(6,13404) (6,12952) (6,12954)
PB[6,290]	(A) $x^2 \approx x^4$ $xyx \approx x^3yx$ $xyx \approx xy^3x$ $xyxy \approx xy^2x$ $xyzx \approx xzyx$	[111111,111122,123412,124312,111155,111166] [111116,111226,123126,111446,111556,666661]	(6,11229) (6,8864)
PB[6,291]	(A) $x^2 \approx x^3$ $xyx \approx x^2yx$ $xyx \approx xyx^2$ $xyxy \approx yx^2y$	[111111,111122,123413,123424,111155,123456] [111111,111122,123423,123424,111155,123456] [111111,111222,123223,111454,111455,123456] [111116,111226,123236,111446,123456,111166] [111116,111226,123236,111446,123456,111666] [111116,111226,123236,111446,123456,116166] [111155,112255,113355,123456,111555,122656]	(6,13413) (6,13421) (6,13386) (6,13357) (6,13422) (6,13358) (6,13359)
PB[6,292]	(A) $x^2 \approx x^4$ $xyx \approx y^2yx$ $xy^2xz \approx xyxyz$	[111111,111122,123422,123422,111156,111165] [111111,111122,123422,124322,111156,111156] [111116,111126,123426,123426,111156,666661] [111116,111126,123426,124326,111156,111116] [111116,111226,123226,111456,111456,666661] [111116,111226,123226,111456,111546,111116] [111155,112255,113455,114355,111155,122256] [111444,112444,113444,111444,122456,122465]	(6,11232) (6,11233) (6,8865) (6,11301) (6,8858) (6,10954) (6,10956) (6,11411)
PB[6,293]	(A) $x^2 \approx x^3$ $xyx \approx x^2yx$ $xyx \approx xyx^2$ $xyxy \approx yx^2y$ $xy^2xz \approx xyxyz$	[111111,111122,123423,123423,111155,123456] [111111,111222,123223,111454,111454,123456] [111111,111222,123233,111444,123456,123456] [111116,111226,123236,111446,123456,111116]	(6,13420) (6,13385) (6,13612) (6,13356)

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Id	Basis Proposal	Min.Lex	GAP
PB[6,294]	(A) $x^2 \approx x^4$ $xyx \approx x^3yx$ $x^2yx \approx xyx^2$ $xyxy \approx xy^2x$ $xy^2x \approx yxyx$	[111111,111122,123423,124324,111155,123456] [111111,111222,123223,111454,111545,123456] [111111,111222,123233,111444,123456,123465] [111116,111226,123236,111446,123456,666661]	(6,11234) (6,11234) (6,11522) (6,8874)
PB[6,295]	(A) $x^2 \approx x^4$ $xyx \approx yx^2$ $xy^2xz \approx x^2y^2z$	[111111,111122,123433,123433,123456,123465] [111111,111122,123433,124344,123456,123456] [111116,111126,123436,123436,123456,666661] [111116,111126,123436,124346,123456,111116] [111116,111226,123336,123456,123456,666661] [111116,111226,123336,123456,123546,111116] [111155,122256,123456,123456,555511,556611] [111155,122456,123456,122456,555511,556511]	(6,11389) (6,11237) (6,8866) (6,11453) (6,8877) (6,11514) (6,9020) (6,9010)
PB[6,296]	(Known basis) Lee and Zhang [4, Proposition 26.5]	[111111,111122,333333,444444,111456,114456] [111111,111122,333333,444444,333456,443456] Note: Lee and Zhang [4]	(6,13501) (6,13549)
PB[6,297]	(Known basis) Lee and Zhang [4, Proposition 26.1]	[111111,111122,333333,444444,121456,124456] Note: Lee and Zhang [4]	(6,13527)
PB[6,298]	(Known basis) Lee and Li [3, Chapter 13]	[111111,111123,111132,123444,123456,123465] Note: Lee and Li [3]	(6,6598)
PB[6,299]	(Known basis) Lee and Li [3, Chapter 14]	[111111,111123,111333,123444,123456,123666] Note: Lee and Li [3]	(6,8496)
PB[6,300]	(A) $x^2 \approx x^3$ $xyx \approx xyxyx$ $x^2yx \approx x^2y^2$ $xyx^2 \approx x^2yx$	[111111,111123,123111,444444,111156,156111] [111111,111123,123111,444444,444456,456444]	(6,8562) (6,11276)
PB[6,301]	(Known basis) Lee and Zhang [4, Proposition 27.3]	[111111,111123,333333,123411,111156,666666] [111111,111123,333333,123433,333356,666666] Note: Lee and Zhang [4]	(6,13559) (6,13561)

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Id	Basis Proposal	Min.Lex	GAP
PB[6,302]	(Known basis) Lee and Zhang [4, Proposition 27.1]	[111111,111123,333333,123423,111156,666666] Note: Lee and Zhang [4]	(6,13560)
PB[6,303]	(Known basis) Lee and Li [3, Chapter 15]	[111111,111123,333333,123441,123456,666666] [111111,111123,333333,123443,123456,666666] Note: Lee and Li [3]	(6,13562) (6,13563)
PB[6,304]	(A) $x^2y \approx y^2x$ $xyx \approx xyx^2$ $xy^2 \approx xy^3$ (B) $x^2y \approx y^2x$ $xyz \approx xyz^2$	[111111,111222,111333,111444,111444,112445]	(6,5854)
PB[6,305]	(A) $x^2 \approx x^3$ $xyx \approx xyx^2$ $x^2y^2 \approx xyxy$	[111111,111222,111333,111444,112444,121456] [111111,111222,111333,111444,112444,122456]	(6,6432) (6,6439)
PB[6,306]	(A) $x^2 \approx x^3$ $xyx \approx xyx^2$ $x^2y^2 \approx xyxy$ $xyzzy \approx xy^2z$	[111111,111222,111333,111444,112445,113446]	(6,6183)
PB[6,307]	(A) $x^2 \approx x^3$ $xyx \approx xyx^2$ $x^2y \approx x^2yx$ $x^2y^2 \approx xyxy$	[111111,111222,111333,111444,112445,123456]	(6,6447)
PB[6,308]	(A) $x^2 \approx x^3$ $xyx \approx xyx^2$ $xy^2x \approx yxyx$ $x^2yz^2 \approx xyxz^2$	[111111,111222,111333,111444,113456,133456]	(6,8276)

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Id	Basis Proposal	Min.Lex	GAP
PB[6,309]	(A) $x^2 \approx x^4$ $xyx \approx x^3yx$ $x^2y \approx x^2yx^2$ $xy^2x \approx y^2x^2$	[111111,111222,111333,111444,123456,132465]	(6,6598)
PB[6,310]	(A) $x^2 \approx x^3$ $xyx \approx xyx^2$ $x^2y \approx y^2xy$ $x^2yz \approx y^2xz$	[111111,111222,111333,111446,112446,111446] [111116,111226,111336,111446,112446,111116]	(6,6167) (6,6165)
PB[6,311]	(A) $x^2 \approx x^4$ $xyx \approx xyx^3$ $x^2y \approx y^3x^2$	[111111,111222,111333,111446,112446,111664] [111111,111222,111333,111455,111544,112544] [111116,111226,111336,111446,112446,666661] [111444,122444,122445,444111,455111,466111]	(6,5793) (6,5794) (6,3079) (6,3141)
PB[6,312]	(A) $x^2 \approx x^3$ $xyx \approx x^2yx$ $xyx \approx xyx^2$ $x^2y^2 \approx xyxy$ $xy^2x \approx yxyx$	[111111,111222,111333,113446,123456,133466]	(6,8496)
PB[6,313]	(A) $x^2 \approx x^5$ $xyz \approx xzy$ $xy^2x \approx y^2x^2$	[111111,111222,111333,113456,113564,113645] [111111,111222,111333,122456,122564,122645] [111156,111256,111356,113456,555561,666615] [111156,111256,111356,122456,555561,666615] [111446,112446,113456,444661,445661,666114] [111446,112446,123446,444661,445661,666114] [113336,123356,336661,346661,356661,661113] [113336,123446,336661,346661,356661,661113] [113355,123356,335511,345511,551133,561133]	(6,9096) (6,9098) (6,9106) (6,9108) (6,14978) (6,14980) (6,15942) (6,15944) (6,15952)
PB[6,314]	(A) $xy \approx yx$ $x^3 \approx x^6$	[111111,111222,112333,123456,123564,123645] [111156,111256,112356,123456,555561,666615] [113355,123456,335511,345511,551133,561134]	(6,9801) (6,9803) (6,15956)

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Id	Basis Proposal	Min.Lex	GAP
PB[6,315]	(A)	[111111,111222,333333,111444,121456,121456]	(6,13654)
	$x^2 \approx x^3$	[111111,111222,333333,111446,121456,111446]	(6,13665)
	$xyx \approx x^2yx$	[111111,112222,113333,114444,123356,123356]	(6,13425)
	$xyz \approx x^2yz$	[111111,112222,113336,123446,123556,113336]	(6,13398)
	$xyz^2y \approx xz^2y^2$	[111116,112226,113336,114446,123356,111116]	(6,12964)
		[111116,112226,113336,123446,123556,111116]	(6,13363)
PB[6,316]	(A)	[111111,111222,333333,111444,121456,121465]	(6,11514)
	$x^2 \approx x^4$	[111111,111222,333333,111446,121456,111664]	(6,11453)
	$x^2y \approx xyx$	[111111,112222,113333,114444,123356,123365]	(6,11389)
	$xyz^2y \approx xz^2y^2$	[111111,112222,113336,123446,123556,116663]	(6,11237)
		[111116,112226,113336,114446,123356,666661]	(6,8866)
		[111116,112226,113336,123446,123556,666661]	(6,8877)
		[111155,122255,123256,144455,555511,566611]	(6,9010)
	[111155,122255,123356,124456,555511,566611]	(6,9020)	
PB[6,317]	(A)	[111111,111222,333333,111446,121456,111466]	(6,13666)
	$x^2 \approx x^3$	[111111,112222,113336,123446,123556,113666]	(6,13401)
	$xyx \approx x^2yx$	[111116,112226,113336,114446,123356,111166]	(6,12965)
	$xyx \approx xyx^2$	[111116,112226,113336,114446,123356,116666]	(6,13056)
	$xyxzx \approx xyzx$	[111116,112226,113336,123446,123556,111666]	(6,13366)
	$xyz^2y \approx xz^2y^2$	[111116,112226,113336,123446,123556,116666]	(6,13433)
PB[6,318]	(A)	[111111,111222,333333,111456,111564,111645]	(6,14920)
	$xy \approx xy^4$	[111111,111222,333333,333456,333564,333645]	(6,14924)
	$xyz \approx xzy$	[111156,112256,113356,114456,555561,666615]	(6,14934)
		[111446,122446,133446,444661,455661,666114]	(6,15931)
PB[6,319]	(A)	[111111,111222,333333,113456,113564,113645]	(6,14921)
	$xy \approx xy^4$ $x^2y \approx xyx$		
PB[6,320]	(A)	[111111,111222,333333,121456,121564,121645]	(6,14922)
	$x^2 \approx x^5$	[111156,112256,123356,124456,555561,666615]	(6,14941)
	$xyz \approx xzy$	[111446,122456,133456,444661,455661,666114]	(6,15934)
PB[6,321]	(A)	[111111,111222,333333,123456,123564,123645]	(6,14923)
	$x^2 \approx x^5$ $x^2y \approx xyx$		

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Id	Basis Proposal	Min.Lex	GAP
PB[6,322]	Inherently non-finitely based	[111111,111223,123131,111446,123456,146161] Note: B_2^1	(6,8564)
PB[6,323]	Inherently non-finitely based	[111111,111223,123233,111446,123456,146466] Note: A_2^1	(6,13747)
PB[6,324]	(A) $xy \approx xy^2$	[111111,111223,333333,111456,111456,666666] [111111,111223,333333,333456,333456,666666]	(6,13752) (6,13759)
PB[6,325]	(A) $xy \approx xy^3$ $x^3y \approx x^2yx$	[111111,111223,333333,111456,111546,666666] [111111,111223,333333,333456,333546,666666]	(6,11550) (6,11554)
PB[6,326]	(Known basis) Lee and Zhang [4, Proposition 27.5]	[111111,111223,333333,123456,123456,666666] Note: Lee and Zhang [4]	(6,13755)
PB[6,327]	(A) $x^2 \approx x^4$ $xyx \approx xyx^3$ $x^3y \approx x^2yx$	[111111,111223,333333,123456,123546,666666]	(6,11552)
PB[6,328]	(A) $x^2 \approx x^5$ $x^2y \approx xyx$ $xy^2x \approx y^2x^2$	[111111,112222,113333,123456,123564,123645] [111111,112222,113356,123456,115563,116635] [111156,112256,113356,123456,555561,666615] [111446,122446,123456,444661,455661,666114]	(6,14919) (6,14916) (6,14939) (6,15929)
PB[6,329]	(A) $x^2 \approx x^4$ $xyx \approx x^3yx$ $xyxz \approx x^2yz$ $xy^2x \approx yxyx$	[111111,112222,113336,123456,123456,116663] [111111,112222,113336,123456,123546,113336] [111116,112226,113336,123456,123456,666661] [111116,112226,113336,123456,123546,111116] [111116,112226,113356,123456,113356,666661] [111116,112226,113356,123456,115536,111116] [111155,122255,123456,123456,555511,566611] [111155,122455,123456,122455,555511,566611]	(6,11236) (6,11375) (6,8876) (6,11370) (6,8861) (6,10959) (6,9019) (6,9007)

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Id	Basis Proposal	Min.Lex	GAP
PB[6,330]	(A)	[111111,112222,113336,123456,123546,113666]	(6,11388)
	$x^2 \approx x^4$	[111116,112226,113336,123456,123546,111666]	(6,11386)
	$xyx \approx xyx^3$	[111116,112226,113336,123456,123546,116666]	(6,11391)
	$xyxy \approx x^2y^2$	[111116,112226,113356,123456,113556,666661]	(6,8862)
	$xy^2x \approx yxyx$	[111116,112226,113356,123456,115536,111616]	(6,10960)
	$xyxzx \approx x^2yzx$	[111116,112226,113356,123456,115536,116666] [111155,122455,123456,124455,555511,566611]	(6,10973) (6,9008)
PB[6,331]	(A)	[111111,112222,113355,123456,113553,123654]	(6,11395)
	$x^2 \approx x^4$		
	$xyx \approx x^3yx$		
	$xyx \approx xyx^3$ $xyxy \approx yx^2y$		
PB[6,332]	(A)	[111111,112222,113356,113356,113356,113556]	(6,10298)
	$x^2 \approx x^3$	[111156,111156,111356,111456,111156,151156]	(6,7541)
	$x^2y \approx yxy$	[111156,111256,111256,111456,111156,115156]	(6,7542)
	$xy^2z \approx xyz$	[111156,112256,113356,113356,111156,111556]	(6,10244)
		[111446,112446,113446,111446,111446,111416]	(6,10417)
		[111446,112446,113446,111446,112446,111416]	(6,10418)
		[111446,112446,113446,111466,111466,111466]	(6,10646)
		[111446,112446,113446,111466,112466,111466]	(6,10647)
PB[6,333]	(A)	[111111,112222,113456,114365,115643,116534]	(6,9404)
	$xy \approx xy^5$	[111456,112456,113456,444165,555641,666514]	(6,5325)
	$x^2y \approx xyx$	[113356,123356,331165,341165,556631,665513]	(6,5329)
	$xyx \approx y^5x^2$	[113356,123356,335561,345561,556613,661135]	(6,9336)
PB[6,334]	(A)	[111111,112222,123356,123356,123356,123556]	(6,11579)
	$x^2 \approx x^3$	[111156,111156,111356,113456,111156,151156]	(6,8221)
	$xyx \approx x^2yx$	[111156,111256,111256,122456,111156,115156]	(6,8226)
	$xy^2z \approx yxyz$	[111156,112256,123356,123356,111156,111556]	(6,11331)
	$xyzzy \approx yxzy$	[111446,112446,123446,111446,111446,111416]	(6,10982)
		[111446,112446,123446,111466,111466,111466]	(6,11128)
PB[6,335]	(A)	[111111,112222,123456,124365,125643,126534]	(6,9405)
	$x^2 \approx x^6$	[111456,112456,123456,444165,555641,666514]	(6,5326)
	$xy \approx yx$	[113356,123456,331165,341165,556631,665513]	(6,5330)
		[113356,123456,335561,345561,556613,661135]	(6,9337)

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Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP
PB[6,336]	(A) $x \approx x^3$ $xyzx \approx xzyx$	[111111,121116,113151,444444,113151,161112] [111111,121116,333333,333453,333453,161112] [111111,121226,333333,121456,121456,161662] [111111,121226,333333,121456,121546,121226] [111111,121456,333333,121456,151624,151624] [111116,121126,113416,113416,151156,666661] [111116,121126,113416,114316,151156,111116] [111116,122226,123256,144446,123256,666661] [111116,122226,123256,144446,125236,111116] [111116,122256,123356,124456,122256,666661] [111116,122256,123356,124456,155526,111116] [111116,122446,133556,122446,133556,666661] [111116,122446,133556,144226,155336,111116] [111155,121455,333366,121455,555511,666633] [111155,121455,333366,141255,111155,333366] [111444,122444,133444,111444,111456,111465] [111456,122456,133456,111456,555614,555614]	(6,14750) (6,14769) (6,14679) (6,14832) (6,11914) (6,14626) (6,14750) (6,14641) (6,14832) (6,14641) (6,14679) (6,14654) (6,11914) (6,11894) (6,14813) (6,14769) (6,11894)
PB[6,337]	(A) $x \approx x^3$ $xyxz \approx x^2yz$	[111111,121116,113451,113451,555555,161112] [111111,121116,113451,114351,555555,121116] [111111,121226,333333,123456,123456,161662] [111111,121226,333333,123456,123546,121226] [111111,122256,123456,123456,155526,666666] [111111,122256,123456,124356,122256,666666] [111111,123456,123456,145236,145236,666666] [111116,122226,123456,123456,155556,666661] [111116,122226,123456,124356,155556,111116] [111155,123456,123456,444466,555511,666644] [111155,123456,132456,444466,111155,444466]	(6,14762) (6,14780) (6,14680) (6,14851) (6,14689) (6,14852) (6,11915) (6,14651) (6,14833) (6,11897) (6,14814)
PB[6,338]	(A) $x \approx x^3$ $xyx^2z \approx xyz$	[111111,121116,113451,444444,445134,121116] [111111,122256,123456,123456,555555,566612] [111111,123456,123456,444444,456123,456123] [111116,122226,123456,144446,145236,111116] [111155,123456,333366,341265,111155,333366]	(6,14796) (6,14690) (6,11916) (6,14837) (6,14817)

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Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP
PB[6,339]	(A) $x \approx x^3$ $xyz^2 \approx xzyz$	[111111,121226,333333,121456,121546,121666] [111116,121126,113416,114316,151156,116616] [111116,121126,113416,114316,151156,161166] [111116,122226,123256,144446,125236,116166] [111116,122226,123256,144446,125236,166666] [111116,122256,123356,124456,125556,666661] [111116,122256,123356,124456,155526,116616] [111116,122256,123356,124456,155526,166666] [111116,122446,133556,144226,155336,166666] [111155,121455,333366,141255,151555,363666] [111456,122456,133456,144456,555614,566614]	(6,14833) (6,14780) (6,14762) (6,14851) (6,14852) (6,14651) (6,14680) (6,14689) (6,11915) (6,14814) (6,11897)
PB[6,340]	(A) $x \approx x^3$ $x^2yx \approx xyx^2$	[111111,121226,333333,123456,123546,121666] [111111,122256,123456,124356,125556,666666] [111116,122226,123456,124356,155556,116616] [111116,122226,123456,124356,155556,166666] [111155,123456,132456,444466,155155,466466]	(6,14872) (6,14883) (6,14872) (6,14883) (6,14891)
PB[6,341]	(A) $x \approx x^3$ $xy^2zy \approx xzy$	[111111,121255,333333,121456,121552,121654] [111155,121156,113355,114455,151151,161152] [111155,122256,123356,124456,155551,166652] [111444,121446,333555,141441,353553,161442] [111444,122455,133466,144411,155422,166433]	(6,14837) (6,14796) (6,14690) (6,14817) (6,11916)
PB[6,342]	(A) $x \approx x^3$ $xyx^2y \approx x^2yxy$	[111111,121255,333333,123456,121552,123654] [111111,122446,123456,124426,125436,666666] [111444,123456,333555,141441,353553,163452]	(6,14887) (6,14888) (6,14895)
PB[6,343]	(A) $xy \approx x^2y$ $xyzy \approx xzy$	[111111,121256,333333,121256,121256,121556] [111156,111156,113356,114456,111156,151156] [111156,122256,122256,144456,111156,115156] [111446,122446,133446,111446,111446,111416] [111446,122446,133446,111466,111466,111466]	(6,14271) (6,13171) (6,14465) (6,13196) (6,13777)
PB[6,344]	(Known basis) $x \approx x^2$ $xyz \approx xyzxzyz$	[111111,121256,333333,123456,126556,666666] Note: Band with induced identity $G_3 \approx I_3$	(6,15646)

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Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP
PB[6,345]	(A) $x \approx x^5$ $xyz \approx xzy$	[111111,121456,333333,141265,151642,161524] [111456,122456,133456,444165,555641,666514]	(6,9501) (6,9498)
PB[6,346]	(A) $x^2y \approx yxy$ $xy^2 \approx x^2y^2$ $xy^3 \approx xy^2$ (B) $x^2y \approx yxy$ $xyz \approx xy^2z$ $xyz^2 \approx yxz^2$	[111111,122256,122256,122356,122256,122556] [111156,111156,112156,111456,111156,115156] [111156,122256,122256,122356,111156,111556] [111446,111446,112446,111446,111456,114446] [111446,111446,112446,116446,116456,111446]	(6,9753) (6,9699) (6,9787) (6,9700) (6,9702)
PB[6,347]	(A) $xy \approx x^2y$ $xy \approx xyxy$ (B) $xy \approx x^2y$ $xy \approx xyxy$ $xyz^2 \approx xyxz^2$	[111111,122456,122456,122456,124456,666666]	(6,14272)
PB[6,348]	(A) $x \approx x^5$ $x^2y \approx xyx$ (B) $x \approx x^5$ $xy \approx x^4yx$	[111111,123456,132465,444444,156432,165423]	(6,9503)
PB[6,349]	(A) $x \approx x^5$ $xyx^2 \approx x^3y$	[111111,123456,132465,444444,456132,465123]	(6,9504)
PB[6,350]	(A) $x \approx x^6$ $xy \approx yx$ (B) $x \approx x^6$ $xy \approx yx$	[111111,123456,134562,145623,156234,162345] [113456,123456,334561,445613,556134,661345]	(6,15960) (6,15961)
PB[6,351]	(A) $x \approx x^4$ $xy^2x \approx xyxy$	[111111,123456,333333,345612,555555,561234]	(6,15903)

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Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP
PB[6,352]	(A)	[111116,111116,111116,111126,112246,666661]	(6,910)
	$xy^2 \approx yxy$	[111116,111116,111126,111126,111246,666661]	(6,910)
	$xyz \approx xzy$	[111116,111116,111126,111216,112236,666661]	(6,2570)
	$x^4 \approx y^2z^2$	[111116,111116,111126,111226,112136,666661]	(6,2570)
		[111444,111444,111445,444111,444111,455113]	(6,928)
		[111444,111445,111445,444111,444111,445113]	(6,928)
PB[6,353]	(A)	[111116,111116,111116,111216,113156,111166]	(6,5551)
	$xyx \approx yx^2$	[111116,111116,111116,111216,113356,111166]	(6,5561)
	$xyz \approx yxyz$	[111116,111116,123336,123336,123346,116666]	(6,9638)
	(B)	[111155,111155,112155,111456,111555,111555]	(6,9545)
	$xyx \approx yx^2$ $xyz \approx xy^2z$		
PB[6,354]	(A)	[111116,111116,111116,111416,112116,111616]	(6,3367)
	$x^2 \approx x^3$	[111116,111116,111116,111446,112446,111666]	(6,6161)
	$x^2y \approx xy^2$	[111116,111116,111126,111416,112116,111616]	(6,3622)
	$xyz \approx yxyz$	[111116,111116,111126,111446,111446,111666]	(6,5921)
	(B)	[111116,111116,111126,111446,112446,111666]	(6,6163)
	$x^2 \approx x^3$	[111116,122226,122226,122226,122326,166666]	(6,4008)
	$x^2y \approx xy^2$	[111116,122226,122226,122236,122326,166666]	(6,4010)
	$x^2y \approx yxy$	[111155,111155,111155,111455,111555,112555]	(6,6174)
	$xyz \approx x^2yz$		
PB[6,355]	(A)	[111116,111116,111116,112116,121456,111166]	(6,3811)
	$x^2 \approx x^3$	[111116,111116,111116,112116,122456,111166]	(6,3824)
	$xyx \approx yx^2$	[111155,111155,111155,113456,111555,131555]	(6,6434)
	$xyz \approx x^2yz$	[111155,111155,111155,122456,111555,112555]	(6,6441)
PB[6,356]	(A)	[111116,111116,111116,113456,133456,666661]	(6,4025)
	$xy \approx x^3y$	[111444,123446,123466,444111,444111,444111]	(6,4240)
	$xyx \approx yx^2$		
	$xyzx \approx xzyx$		
	(B)		
	$xy \approx x^3y$ $xyx \approx yx^2$ $xyzx \approx xzyx$		

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Id	Basis Proposal	Min.Lex	GAP
PB[6,357]	(A) $xyz \approx yxz$ $x^2y^2 \approx x^3y$ (B) $xyz \approx yxz$ $x^2yz \approx xyz^2$ $x^5 \approx yzabx$	[111116,111116,111126,111236,112346,111116]	(6,5369)
PB[6,358]	(A) $xy \approx yx$ $xy^3 \approx x^3y$ $x^5 \approx xy^2z^2$ (B) $xy \approx yx$ $x^3y \approx xy^3$ $x^5 \approx xy^2z^2$ $xyzab \approx x^3yzab$	[111116,111116,111126,111236,112346,666661] [111444,111444,112445,444111,444112,445123]	(6,2583) (6,2584)
PB[6,359]	(A) $x^2y \approx xy^2$ $xyx \approx yx^2$ (B) $x^2y \approx xy^2$ $x^2y \approx yxy$ $xyza \approx x^2yza$	[111116,111116,111126,111416,112136,111616] [111116,122226,122226,122236,122346,166666]	(6,5683) (6,5733)
PB[6,360]	(A) $x^2y \approx x^3y$ $xy^2 \approx x^2y^2$ $xyx \approx yxyx$ $xyx^2 \approx xyx$ (B) $xyx \approx yx^3$ $xyz \approx x^2yz$	[111116,111116,111126,123436,111126,111616]	(6,5636)

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Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP
PB[6,361]	(A) $x^2 \approx x^3$ $xyx \approx x^2yx$ $xy^2 \approx x^2y^2$ $xy^2z \approx yxyz$ (B) $x^2 \approx x^3$ $xy^2 \approx xyxy$ $xyz \approx x^2yz$ $xyzx \approx yxzx$	[111116,111116,111126,123446,123446,111666]	(6,6512)
PB[6,362]	(A) $x^2y \approx yxy$ $xy^2 \approx xy^3$ $x^2y^2 \approx x^2y$	[111116,111116,111136,111216,111156,111166] [111116,111116,111136,111236,111156,111166] [111116,112226,113336,113336,113346,116666] [111155,111155,112155,111455,111555,111655]	(6,5527) (6,5532) (6,9643) (6,9539)
PB[6,363]	(A) $x^2y \approx x^3y$ $xyx \approx yx^2$ $x^2yx \approx xyx$ (B) $x^2y \approx x^3y$ $xyx \approx yx^2$ $xyx \approx x^2yx$	[111116,111116,111136,111216,113156,111166] [111116,111116,111136,111236,113356,111166] [111116,112226,123336,123336,123346,116666] [111155,111155,112155,111456,111555,111655]	(6,5553) (6,5563) (6,9657) (6,9546)
PB[6,364]	(A) $x^2y \approx x^3y$ $xyx \approx yx^2$ (B) $x^2y \approx x^3y$ $xyx \approx yx^2$	[111116,111116,111236,111236,123456,111166]	(6,5641)
PB[6,365]	(A) $x^2 \approx x^3$ $xyx \approx x^2yx$ $x^2y^2 \approx xyxy$ $xy^2z \approx xyz$	[111116,111116,111336,121446,121556,111666] [111155,111155,123355,124455,115555,116655]	(6,7659) (6,10620)

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Id	Basis Proposal	Min.Lex	GAP
PB[6,366]	(A)	[111116,111116,111336,121456,121456,666661]	(6,4058)
	$x^2 \approx x^4$	[111116,111116,111336,121456,121546,111116]	(6,6222)
	$xyx \approx y^3x^2$	[111155,111155,123455,123455,555511,556611]	(6,4164)
	$xyxz \approx x^2yz$	[111155,112255,113456,113456,555511,555511]	(6,4162)
	(B)	[111155,112255,113456,114356,111155,111155]	(6,9873)
	$x^2 \approx x^4$	[111444,123446,123446,444111,455111,444111]	(6,4270)
PB[6,367]	(A)	[111116,111116,111336,121456,121546,111666]	(6,6225)
	$x^2 \approx x^4$	[111155,111155,123455,124355,115555,116655]	(6,9878)
	$xyx \approx y^3x^2$		
PB[6,368]	$xyz^2 \approx xzyz$		
	(A)	[111116,111116,112116,111446,111556,111666]	(6,9689)
	$x^2y \approx xy^2$	[111116,122226,122226,122326,155556,166666]	(6,9777)
PB[6,369]	$xyx \approx x^2yx$		
	$xy^2 \approx xy^3$		
	(B)		
	$x^2y \approx xy^2$		
	$xyz \approx xzyz$		
	(A)	[111116,111116,112116,111456,111456,666661]	(6,5736)
$xyz \approx yxz$	[111116,111116,112116,111456,111546,111116]	(6,9531)	
$x^2y \approx y^2x^2y$	[111116,122256,122256,122356,122256,666661]	(6,9649)	
	[111116,122256,122256,122356,155526,111116]	(6,5744)	
	[111116,122446,122446,144226,144236,111116]	(6,5758)	
	[111155,111155,113455,113455,555511,555512]	(6,5750)	
	[111444,111444,112444,111444,111456,111465]	(6,9551)	
PB[6,370]	(A)	[111116,111116,112116,111456,111546,111666]	(6,9534)
	$xyx \approx yx^2$	[111116,122256,122256,122356,155526,166666]	(6,5746)
	$xyz \approx y^2xyz$	[111116,122446,122446,144226,144236,166666]	(6,5760)
	$xy^3 \approx x^3y$		
	(B)		
$x^2y \approx yx^2y^2$			
$xyz \approx x^3yz$			

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Id	Basis Proposal	Min.Lex	GAP
PB[6,371]	(A)	[111116,111116,113456,114536,115346,111116]	(6,14901)
	$xy \approx y^3xy$	[111116,122456,122456,144526,155246,111116]	(6,14954)
	$xyz \approx yxz$	[111116,123356,135526,135526,152236,111116]	(6,15915)
		[111155,123455,134255,142355,111155,111155]	(6,14911)
		[111156,111156,113456,113456,555561,666615]	(6,14930)
		[111156,122456,122456,122456,555561,666615]	(6,14949)
		[111446,123446,123446,444661,444661,666114]	(6,15930)
PB[6,372]	(A)	[111116,111116,113456,114536,115346,116666]	(6,14906)
	$xy \approx y^3xy$	[111116,122456,122456,144526,155246,166666]	(6,14958)
	$xyx \approx yx^2$	[111116,123356,135526,135526,152236,166666]	(6,15920)
	(B)		
	$xy \approx yxy^3$		
PB[6,373]	(A)	[111116,111116,113456,114536,115346,666661]	(6,9112)
	$xy \approx y^7x$	[111116,122456,122456,144526,155246,666661]	(6,11936)
	(B)	[111116,123356,135526,135526,152236,666661]	(6,14986)
	$xy \approx yx$	[111155,123455,134255,142355,555511,555511]	(6,9116)
	$xy \approx x^7y$	[111156,111156,113456,114356,555561,666615]	(6,11931)
		[111156,122456,122456,144256,555561,666615]	(6,9115)
		[111156,123356,132256,132256,555561,666615]	(6,9119)
		[111446,123446,132446,444661,444661,666114]	(6,14987)
PB[6,374]	(A)	[111116,111116,123456,124536,125346,111116]	(6,14920)
	$xy \approx x^4y$	[111155,123456,134256,142356,111155,111155]	(6,14924)
	$xyz \approx yxz$	[111156,111156,123456,123456,555561,666615]	(6,14934)
	(B)	[111446,123456,123456,444661,444661,666114]	(6,15931)
		$xy \approx x^4y$	
	$xyz \approx yxz$		
PB[6,375]	(A)	[111116,111116,123456,124536,125346,116666]	(6,14921)
		$xy \approx x^4y$	
	$xyx \approx yx^2$		
PB[6,376]	(A)	[111116,111116,123456,124536,125346,666661]	(6,9113)
	$xy \approx x^7y$	[111155,123456,134256,142356,555511,555511]	(6,9117)
	$xyx \approx yx^2$	[111156,111156,123456,124356,555561,666615]	(6,11933)
	$xy^2x \approx x^2y^2$	[111446,123456,132456,444661,444661,666114]	(6,14988)

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Id	Basis Proposal	Min.Lex	GAP
PB[6,377]	(A)	[111116,111126,111136,111246,121456,111166]	(6,5614)
	$x^3 \approx x^4$	[111116,111126,111136,111246,122456,111166]	(6,5622)
	$xy^2x \approx yxyx$	[111116,111126,112236,112246,123356,111166]	(6,9451)
	$xyz^2 \approx xzyz$	[111155,111255,112355,123455,111555,111655]	(6,9582)
PB[6,378]	(A)	[111116,111126,111136,112116,111156,111166]	(6,3373)
	$x^2 \approx x^3$	[111116,111126,111136,112126,111156,111166]	(6,3378)
	$x^2y \approx yxy$ $x^2y^2 \approx x^2y$	[111155,111255,111355,111455,111555,112555]	(6,6177)
PB[6,379]	(A)	[111116,111126,111136,112116,121456,111166]	(6,3813)
	$x^2 \approx x^3$	[111116,111126,111136,112116,122456,111166]	(6,3826)
	$xyx \approx x^2yx$	[111116,111126,111136,112126,121456,111166]	(6,3815)
	$xy^2x \approx yxyx$	[111116,111126,111136,112126,122456,111166]	(6,3828)
	$x^2yz^2 \approx x^2zyz$	[111155,111255,111355,113456,111555,131555]	(6,6437)
	(B)	[111155,111255,111355,122456,111555,112555]	(6,6444)
	$x^2 \approx x^3$ $xyx \approx x^2yx$ $x^2yzy \approx x^2zy^2$ $xyzaxz \approx zxyxaxz$		
PB[6,380]	(A)	[111116,111126,111136,112236,111156,111166]	(6,5581)
	$x^2y \approx x^2y^2$		
	$xy^2 \approx xy^3$		
	$xyx \approx y^3x$		
(B)			
$xyx \approx yxyx$			
$xyz \approx xyz^2$			
PB[6,381]	(A)	[111116,111126,111136,112246,113356,111166]	(6,5597)
	$xy^2 \approx xy^3$		
	$x^2yx \approx xyx^2$		
	$xyxy \approx x^2y^2$		
	(B)		
$xy^2 \approx xy^3$			
$xyzzy \approx xzy^2$			
$x^3y^2 \approx yx^2y^2$			

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Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP
PB[6,382]	(A)	[111116,111126,111136,113416,121156,111166]	(6,8133)
	$x^2 \approx x^3$	[111116,111126,111136,113416,121156,111616]	(6,8139)
	$xyx \approx xyx^2$	[111116,111126,111316,111416,123156,111166]	(6,7947)
	$xy^2x \approx yxyx$	[111116,111126,111316,111416,123156,111616]	(6,7979)
	$xyxz \approx xyzx$	[111155,111255,111355,113455,111555,121556]	(6,8158)
	$xyxz^2 \approx xzyxz$	[111155,111255,113155,121456,115155,116155]	(6,11016)
	(B)	[111155,111255,113156,121455,111555,111655]	(6,11066)
	$x^2 \approx x^3$	[111155,111255,123155,111456,111555,111655]	(6,11085)
	$xyx \approx xyx^2$	[111155,111255,123156,111455,115155,116155]	(6,11023)
	$x^2y^2 \approx yx^2y$		
$xyzx \approx xyxzx$			
$xyxz^2 \approx xzyxz$			
PB[6,383]	(A)	[111116,111126,111136,113436,121156,111166]	(6,8134)
	$x^2 \approx x^3$	[111116,111126,111136,113436,121156,111616]	(6,8140)
	$xyx \approx xyx^2$	[111116,111126,111316,111416,123356,111166]	(6,7954)
	$xyxy \approx yx^2y$	[111116,111126,111316,111416,123356,111616]	(6,7984)
	$xyzxz \approx xzyxz$	[111155,111255,123255,111456,111555,111655]	(6,11086)
		[111155,111255,123256,111455,115155,116155]	(6,11028)
PB[6,384]	(A)	[111116,111126,111236,112346,123456,111166]	(6,5690)
	$xyx \approx yx^2$		
	$x^4 \approx x^5$		
	(B)		
$xyx \approx yx^2$			
$x^4 \approx x^5$			
PB[6,385]	(A)	[111116,111126,123316,124416,111156,111166]	(6,13407)
	$x^2 \approx x^3$	[111116,111126,123316,124416,111156,116616]	(6,13330)
	$xyx \approx x^2yx$	[111116,111226,123116,111446,111556,111666]	(6,13045)
	$xyx \approx xy^2x$	[111116,111226,123116,111446,111556,116116]	(6,12950)
	$x^2y^2 \approx xyxy$	[111155,112255,113355,114455,115555,125556]	(6,13061)
	(B)	[111155,121155,113356,114456,151155,161155]	(6,13438)
	$x^2 \approx x^3$		
	$xyx \approx x^2yx$		
	$x^2y^2 \approx xyxy$		
$xyzy \approx xzyzy$			

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Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP
PB[6,386]	(A)	[111116,111126,123326,124426,111156,111166]	(6,13419)
	$x^2 \approx x^3$	[111116,111126,123326,124426,111156,116616]	(6,13351)
	$xyx \approx x^2yx$	[111116,111226,123226,111446,111556,111666]	(6,13051)
	$xyx^2 \approx xyx$	[111116,111226,123226,111446,111556,116116]	(6,12959)
PB[6,387]	(A)	[111116,111126,123416,124316,111156,111166]	(6,11300)
	$x^2 \approx x^4$	[111116,111126,123416,124316,111156,116616]	(6,11306)
	$xyx \approx y^3x^2$	[111116,111226,123116,111456,111546,111666]	(6,10967)
		[111116,111226,123116,111456,111546,116116]	(6,10950)
		[111155,112255,113455,114355,115555,125556]	(6,10976)
PB[6,388]	(A)	[111116,111126,123426,124326,111156,111166]	(6,11302)
	$x^2 \approx x^4$	[111116,111126,123426,124326,111156,116616]	(6,11307)
	$xyx \approx y^2xyx$	[111116,111226,123226,111456,111546,111666]	(6,10970)
	$x^2yx \approx xyx^2$	[111116,111226,123226,111456,111546,116116]	(6,10955)
PB[6,389]	(A)	[111116,111136,111336,111446,111556,111116]	(6,7184)
	$xy \approx xy^2$	[111155,112255,113355,114455,111155,111255]	(6,10475)
PB[6,390]	(A)		
	$xy \approx xy^2$		
	$xyx \approx x^2yx$		
	$x^2yzy \approx x^2zy$		
PB[6,391]	(A)	[111116,111136,111336,111446,111556,666661]	(6,4025)
	$xy \approx xy^3$	[111444,122444,133444,444111,446111,466111]	(6,4240)
	$x^2y \approx xyx$		
	$x^2yz \approx x^2zy$		

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Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP
PB[6,392]	(A) $x^2 \approx x^3$ $xyx \approx x^2yx$ $x^2yz^2 \approx x^2zyz$ $xy^2xz \approx x^2y^2z$ (B) $x^2 \approx x^3$ $xyx \approx x^2yx$ $x^2y^2z \approx xy^2xz$ $x^2yzy \approx x^2zy^2$ $xyxzx \approx xzxyx$	[111116,111136,111336,123446,123556,111116] [111155,112255,123356,124456,111155,111255]	(6,8448) (6,11262)
PB[6,393]	(A) $x^2 \approx x^3$ $xyx \approx x^2yx$ $x^2yz^2 \approx x^2zyz$ (B) $x^2 \approx x^3$ $xyx \approx x^2yx$ $x^2yzy \approx x^2zy^2$	[111116,111136,111336,123446,123556,111666]	(6,8453)
PB[6,394]	(A) $x^2 \approx x^4$ $xyx \approx x^3yx$ $xy^2x \approx x^2y^2$ $x^2yz^2 \approx x^2zyz$	[111116,111136,111336,123446,123556,666661] [111444,122456,133456,444111,446111,466111]	(6,4091) (6,4297)
PB[6,395]	(A) $x^2 \approx x^3$ $xyx \approx xyx^2$ $x^2y \approx y^2xy$	[111116,111226,111336,111446,112446,111666]	(6,6171)
PB[6,396]	(A) $x^2 \approx x^4$ $xyx \approx x^3yx$ $xyxz \approx x^2yz$ $xy^2x \approx yxyx$ $xyzx \approx xzyx$	[111116,111226,111336,113456,113456,666661] [111116,111226,111336,113456,113546,111116] [111116,111226,111336,122456,122456,666661] [111116,111226,111336,122456,122546,111116] [111155,112255,113456,113456,555511,556611] [111155,112255,123455,123455,555511,556611] [111444,123446,123446,444111,455111,466111] [111444,123455,123455,444111,455111,466111]	(6,4061) (6,6234) (6,4096) (6,6502) (6,4166) (6,4205) (6,4273) (6,4302)

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Id	Basis Proposal	Min.Lex	GAP
PB[6,397]	(A) $x^2 \approx x^4$ $xyx \approx x^3yx$ $xy^2x \approx yxyx$ $xyz^2 \approx xzyz$ (B) $x^2 \approx x^4$ $xyx \approx x^3yx$ $x^2y^2 \approx yx^2y$ $xyz^2 \approx xzy^2$	[111116,111226,111336,113456,113546,111666] [111116,111226,111336,122456,122546,111666] [111155,112255,113456,114356,115555,116655]	(6,6239) (6,6506) (6,9880)
PB[6,398]	(A) $x^2 \approx x^3$ $xyx \approx x^2yx$ $xy^2x \approx yxyx$ $x^2yz^2 \approx xzxyz$	[111116,111226,111336,113456,133456,111666]	(6,8281)
PB[6,399]	(A) $x^2 \approx x^4$ $xyx \approx x^3yx$ $xyxy \approx x^2y^2$ $xy^2x \approx yxyx$ $xyxzx \approx xzxyx$	[111116,111226,111336,113456,133456,666661] [111444,123446,123466,444111,455111,466111]	(6,4091) (6,4297)
PB[6,400]	(A) $x^2 \approx x^4$ $xyx \approx x^3yx$ $xy^2z \approx y^2xz$	[111116,111226,111336,123456,132546,111116] [111116,111236,111326,123456,123546,111116]	(6,6602) (6,6536)
PB[6,401]	(A) $x^2 \approx x^4$ $xy^2 \approx y^2xy^2$ $xyx \approx xyx^3$ $xyxy \approx x^2y^2$ (B) $x^2 \approx x^4$ $xyx \approx xyx^3$ $xy^2 \approx y^2xy^2$	[111116,111226,111336,123456,132546,111666] [111116,111236,111326,123456,123546,111666]	(6,6605) (6,6543)

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Table 1 – Continued from previous page

Id	Basis Proposal	Min.Lex	GAP
PB[6,402]	(A) $x^3 \approx x^4$ $xyz^2 \approx xzyz$	[111116,111226,112336,123446,123556,111666]	(6,9739)
PB[6,403]	(A) $x^3 \approx x^5$ $xyz \approx yxz$	[111116,111226,112336,123456,123456,666661] [111116,111226,112336,123456,123546,111116] [111155,112255,123456,123456,555511,556612]	(6,5740) (6,9595) (6,5754)
PB[6,404]	(A) $x^3 \approx x^5$ $xyx \approx yx^2$ (B) $x^3 \approx x^5$ $xyx \approx yx^2$	[111116,111226,112336,123456,123546,111666]	(6,9597)
PB[6,405]	(A) $x^2 \approx x^3$ $xyx \approx xy^2x$ $xyx^2 \approx xyx$ $xyzxy \approx xzyxy$	[111116,111226,123126,111446,111556,111666] [111116,111226,123126,111446,111556,116116]	(6,13047) (6,12953)
PB[6,406]	(A) $x^2 \approx x^3$ $xyx \approx xyxyx$ $x^2y^2 \approx yx^2y$	[111116,111236,123116,111456,145116,111116] [111444,112445,113446,111444,121454,131464]	(6,8562) (6,11276)
PB[6,407]	(A) $x^2 \approx x^4$ $x^2yx \approx xyx^2$ $xy^2x \approx x^2y^2$	[111116,111236,123116,111456,145116,666661] [111444,121446,113454,444111,454113,446121]	(6,4103) (6,4309)
PB[6,408]	Inherently non-finitely based	[111116,111236,123236,111456,145456,666661] Note: A_2^g	(6,8878)
PB[6,409]	(A) $xy \approx xy^4$ $xyx \approx y^4x^2$ $xyxz \approx x^2yz$ (B) $xy \approx xy^4$ $x^2y \approx yx^2y^3$ $x^2yz \approx xyxz$	[111116,112226,113456,114536,115346,111116] [111156,112256,113456,113456,555561,666615] [111446,123446,123446,444661,455661,666114]	(6,14907) (6,14933) (6,15933)

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Id	Basis Proposal	Min.Lex	GAP
PB[6,410]	(A) $xy \approx xy^4$ $xyx \approx y^4x^2$	[111116,112226,113456,114536,115346,116666]	(6,14910)
PB[6,411]	(A) $xy \approx xy^7$ $x^2y \approx xyx$ $xyx \approx y^7x^2$	[111116,112226,113456,114536,115346,666661] [111155,123455,134255,142355,555511,566611] [111156,112256,113456,114356,555561,666615] [111446,123446,132446,444661,455661,666114]	(6,9113) (6,9117) (6,11933) (6,14988)
PB[6,412]	(A) $x^2 \approx x^5$ $xyz \approx yxz$	[111116,112226,123456,124536,125346,111116] [111156,112256,123456,123456,555561,666615] [111446,123456,123456,444661,455661,666114]	(6,14922) (6,14941) (6,15934)
PB[6,413]	(A) $x^2 \approx x^5$ $xyx \approx yx^2$	[111116,112226,123456,124536,125346,116666]	(6,14923)
PB[6,414]	(A) $x^2 \approx x^8$ $xy \approx yx$	[111116,112226,123456,124536,125346,666661] [111155,123456,134256,142356,555511,566611] [111156,112256,123456,124356,555561,666615] [111446,123456,132456,444661,455661,666114]	(6,9114) (6,9118) (6,11935) (6,14989)
PB[6,415]	(A) $xy \approx xy^2$ $xy^2 \approx xyxy$	[111116,122226,122246,144446,155556,166666]	(6,14272)
PB[6,416]	(A) $x \approx x^3$ $xyx^2y \approx xy^2$	[111116,122226,123456,144446,145236,116166] [111116,122226,123456,144446,145236,166666] [111155,123456,333366,341265,151555,363666]	(6,14887) (6,14888) (6,14895)
PB[6,417]	(A) $xy \approx xyxy$	[111116,122456,122456,122456,124456,166666] [111456,111456,113456,111456,115456,141456] [111456,111456,113456,111456,115456,145456] [111456,122456,122456,111456,114456,166456] [113356,113356,113356,113456,113556,133356] [113356,113356,113356,113456,113556,133556] [113356,113356,153356,153456,113356,153656]	(6,14270) (6,13172) (6,13173) (6,14537) (6,13197) (6,13198) (6,13778)

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Id	Basis Proposal	Min.Lex	GAP
PB[6,418]	(A) $xy \approx y^2xy$ $xy^3 \approx yxy^2$	[111116,122456,122456,122456,124456,666661] [111156,111156,113456,114356,111156,151156] [111156,122456,122456,144256,111156,115156] [111156,123356,132256,132256,111156,111556] [111446,123446,132446,111446,111446,111416] [111446,123446,132446,111466,111466,111466]	(6,11782) (6,11162) (6,8932) (6,9073) (6,11170) (6,11602)
PB[6,419]	(A) $x \approx x^5$ $xyz \approx yxz$	[111116,123456,132546,145326,154236,111116] [111456,123456,123456,444165,555641,666514]	(6,9501) (6,9498)
PB[6,420]	(A) $x \approx x^5$ $xyx \approx yx^2$	[111116,123456,132546,145326,154236,166666]	(6,9503)
PB[6,421]	(A) $xyx \approx x^3yx$ $xy^2 \approx x^3y^2$ $x^2y \approx y^2x^2y$ $x^2yx \approx yx^3$	[111155,111155,112155,111456,111551,111654] [111155,122256,122256,122356,155551,166652] [111444,122455,122455,144411,155422,155423]	(6,9535) (6,5747) (6,5761)
PB[6,422]	(A) $x^2y \approx xzy$	[111155,111155,112155,444466,111155,444466]	(6,9766)
PB[6,423]	(A) $x^3 \approx xy^2$ $x^2y \approx xyx$	[111155,111155,112155,444466,555511,666644] [111444,111444,333555,444111,555333,444112]	(6,5496) (6,5507)
PB[6,424]	(A) $x^2 \approx x^4$ $xyx \approx x^3yx$ $x^2yx \approx y^3x^3$	[111155,111255,123156,111455,115151,126153]	(6,11311)
PB[6,425]	(A) $x^2 \approx x^4$ $xyx \approx y^2xyx$ $xyxy \approx yx^2y$	[111155,111255,123256,111455,115151,126253]	(6,11312)

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Id	Basis Proposal	Min.Lex	GAP
PB[6,426]	(Known basis) $x^2 \approx x^3$ $xyx \approx zyx$	[111156,111156,111156,112156,111156,111556] [111156,111156,111156,112156,111156,115156] [111156,111156,111156,112156,111156,115556] [111156,111156,111256,112156,111156,111556] [111156,111156,111256,112156,111156,115556] [111446,111446,111446,111446,112446,111416] [111446,111446,111446,111446,112446,114416] [111446,111446,111446,111446,112446,114446] [111446,111446,111446,111466,112466,111466] [113336,113346,113366,113366,113366,113366] Note: Website W(6,4)	(6,3557) (6,3393) (6,3558) (6,3625) (6,3626) (6,6172) (6,6187) (6,6188) (6,6180) (6,9884)
PB[6,427]	(A) $x^2 \approx y^3x^2$ $xyz \approx xzy$ (B) $x^2 \approx yx^2y^2$ $xyz \approx xyza^3$	[111156,111156,111156,112156,555561,666615] [113336,113336,336661,336661,346661,661113] [113336,113346,336661,336661,336661,661113] [113355,113355,335511,335511,551133,551233] [122255,255511,255511,256511,511122,511122]	(6,4335) (6,14991) (6,14991) (6,14994) (6,15964)
PB[6,428]	(A) $x^3 \approx y^3$ $xy^2 \approx yxy$ $xyz \approx xzy$	[111156,111156,111156,112256,555561,666615] [111156,111156,111256,112256,555561,666615] [111156,111156,112156,112256,555561,666615] [122255,255511,255511,256611,511122,511122] [122255,255511,255611,256611,511122,511122] [122255,255511,256611,256611,511122,511122]	(6,5763) (6,5763) (6,9506) (6,15968) (6,15968) (6,15971)
PB[6,429]	(A) $x^2 \approx x^2y^3$ $xy \approx yx$	[111156,111156,111256,112156,555561,666615] [113336,113346,336661,336661,346661,661113] [113355,113355,335511,335512,551133,551233] [122255,255511,255611,256511,511122,511122]	(6,4336) (6,14992) (6,14995) (6,15965)
PB[6,430]	(A) $x^2y \approx yxy$ $x^4 \approx yzx^2$	[111156,111156,111256,112356,111156,111556]	(6,5686)
PB[6,431]	(A) $xy \approx yx$ $x^4 \approx xy^3$	[111156,111156,111256,112356,555561,666615] [113355,113355,335511,335512,551133,551234]	(6,5765) (6,14998)

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Id	Basis Proposal	Min.Lex	GAP
PB[6,432]	(A) $x^2 \approx x^3$ $xyx \approx yxyx$ $xy^2z \approx xyz$	[111156,111156,111356,121456,111156,151656] [111446,111446,123446,164446,165446,111446] [111446,112446,113456,111446,111446,116416] [111446,112446,113456,114466,114466,114466]	(6,7675) (6,10642) (6,10425) (6,10644)
PB[6,433]	(A) $x^2 \approx x^3$ $xyx \approx x^2yx$ $xyxz \approx y^2xz$	[111156,111156,111356,121456,111556,115156] [111156,111156,111356,121456,111556,115556] [111446,111446,123446,114446,115446,111416] [111446,111446,123446,114446,115446,114416] [111446,112446,113456,161446,161446,116446] [111446,112446,113456,166446,166446,116446]	(6,8219) (6,8220) (6,10980) (6,10981) (6,11118) (6,11119)
PB[6,434]	(A) $x^2 \approx x^3$ $xyx \approx x^2yx$ $xy^2z \approx yxyz$	[111156,111156,111356,123456,111156,151656] [111156,111256,111256,123456,111156,115656] [111446,111446,123456,164446,165446,111446] [111446,112446,123456,111446,111446,116416] [111446,112446,123456,111446,112446,116416] [111446,112446,123456,114466,114466,114466]	(6,8232) (6,8233) (6,11124) (6,10988) (6,10989) (6,11126)
PB[6,435]	(A) $xy \approx xy^2$ $xyxzy \approx xzy$	[111156,111156,113356,114456,111656,116656] [111156,122256,122256,144456,111656,166656] [111446,122446,133446,116446,116446,166446]	(6,12198) (6,14467) (6,12526)
PB[6,436]	(A) $xy \approx x^2y$	[111156,111156,123356,124456,111156,156656] [111446,122456,133456,111446,111446,166416]	(6,13752) (6,13759)
PB[6,437]	(A) $xy \approx x^2y$ $xyxzy \approx xzy^2$	[111156,111156,123356,124456,111656,116656] [111446,122456,133456,116446,116446,166446]	(6,13501) (6,13549)
PB[6,438]	(A) $xy \approx x^3y$ $xyx^2 \approx yx^3$	[111156,111156,123456,124356,111156,156656] [111446,123456,132456,111446,111446,166416]	(6,11550) (6,11554)
PB[6,439]	(A) $x^2 \approx x^3$ $xyx \approx x^2yx$ $xyxy \approx yx^2y$ $xyzy^2 \approx xzy^2$	[111156,111256,111356,113456,111556,115656] [111156,111256,111356,122456,111556,155656] [111446,112446,113456,114446,115446,116416] [111446,112446,113456,114466,115466,116466]	(6,7676) (6,8500) (6,10426) (6,10643)

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Id	Basis Proposal	Min.Lex	GAP
PB[6,440]	(A)	[111156,111256,111356,113456,111556,151156]	(6,8222)
	$x^2 \approx x^3$	[111156,111256,111356,113456,111556,151556]	(6,8223)
	$xyx \approx x^2yx$	[111156,111256,111356,122456,111556,115156]	(6,8227)
	$xyz^2x \approx zyxzx$	[111156,111256,111356,122456,111556,115556]	(6,8228)
		[111446,112446,113456,114446,115446,141446]	(6,10984)
		[111446,112446,113456,114446,115446,144446]	(6,10983)
PB[6,441]	(A)	[111156,111256,112356,123456,111556,115656]	(6,9726)
	$x^3 \approx x^4$		
	$x^2yx \approx x^3yx$		
	$xyx^2 \approx yx^3$		
PB[6,442]	(A)	[111156,111256,123156,111456,111556,156156]	(6,13559)
	$x^2 \approx x^3$	[111446,112446,113446,114446,124456,144466]	(6,13561)
	$xyx \approx yxyx$		
	$x^2y^2 \approx yxy^2$		
PB[6,443]	(A)	[111156,111256,123256,111456,111556,156556]	(6,13560)
	$x^2 \approx x^3$		
	$xyx \approx yxyx$		
PB[6,444]	(A)	[111156,112256,113356,114456,111656,116656]	(6,12399)
	$xy \approx xy^2$		
	$xyxzy \approx x^2zy$		
PB[6,445]	(A)	[111156,112256,113356,114456,115556,151156]	(6,13184)
	$x^2 \approx x^3$	[111156,112256,113356,114456,115556,155556]	(6,13188)
	$xyx \approx x^2yx$		
	$xyzzy \approx xz^2y$		
PB[6,446]	(A)	[111156,112256,113356,114456,115556,151556]	(6,13185)
	$x^2 \approx x^3$		
	$xyx \approx x^2yx$		
	$x^2y \approx xyxy$		
PB[6,447]	(A)	[111156,112256,113356,123456,115556,151656]	(6,13562)
	$x^2 \approx x^3$	[111156,112256,113356,123456,115556,155656]	(6,13563)
	$xyx \approx x^2yx$		
	$xyxy \approx yx^2y$		
PB[6,448]	(A)	[111156,112256,113456,114356,115556,151156]	(6,11165)
	$x^2 \approx x^4$	[111156,112256,113456,114356,115556,155556]	(6,11166)
	$xyx \approx x^3yx$		
	$x^3y \approx y^2xy$		

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Id	Basis Proposal	Min.Lex	GAP
PB[6,449]	(A) $x^2 \approx x^3$ $xyx \approx x^2yx$ $x^2yz^2 \approx xzxyz$ $xyz^2 \approx xzyxz$	[111156,112256,123356,124456,111656,116656]	(6,13527)
PB[6,450]	(A) $x^2 \approx x^3$ $xyx \approx x^2yx$	[111156,112256,123356,124456,115556,156656]	(6,13755)
PB[6,451]	(A) $x^2 \approx x^4$ $xyx \approx x^3yx$ $xyx^2 \approx yx^3$ $xyxy \approx yx^2y$	[111156,112256,123456,124356,115556,156656]	(6,11552)
PB[6,452]	(Known basis) $x \approx x^2$ $xyz \approx xyxzyz$	[111156,122256,123456,144456,115656,166656] Note: Band with induced identity $\overline{G_3} \approx \overline{I_3}$	(6,15646)
PB[6,453]	(A) $x \approx x^5$ $x^2yx \approx yx^3$	[111444,123456,132465,144411,156432,165423]	(6,9504)
PB[6,454]	(A) $x \approx x^3$	[111444,123456,333555,141441,353553,361542]	(6,14897)
PB[6,455]	(A) $x^2y \approx yxy$ $xy^2 \approx zxy^2$	[111456,111456,112456,111456,114456,145456]	(6,9727)
PB[6,456]	(A) $x^3 \approx y^2x$ $xyz \approx yxz$	[111456,111456,112456,111456,555614,555614] [113356,113356,331165,331265,113356,331165]	(6,5496) (6,5507)
PB[6,457]	(A) $xy \approx yx$ $x^3 \approx x^3y^4$	[111456,111456,112456,444165,555641,666514] [113356,113356,331165,331265,556631,665513] [122446,211664,211664,466221,466231,644112]	(6,5113) (6,5114) (6,5115)
PB[6,458]	(A) $x \approx x^4$ $xy^2x \approx yxyx$	[113355,123456,133551,143652,153153,163254]	(6,15903)
PB[6,459]	(A) $x \approx xy^3$ $xy \approx xzyz^2$	[113355,224466,335511,446622,551133,662244]	(6,15959)

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Id	Basis Proposal	Min.Lex	GAP
PB[6,460]	(A) $xy \approx yxz^5$	[113456,113456,334561,445613,556134,661345] [122456,244561,244561,455612,566124,611245]	(6,14999) (6,15973)
PB[6,461]	(A) $x \approx y^3x$ $xy \approx zxz^2y$	[123456,123456,345612,345612,561234,561234]	(6,15959)
PB[6,462]	(Known basis) $x \approx y^6x$ $xy \approx yx$	[123456,214365,345612,436521,561234,652143] Note: Website W(6,5)	(6,14996)
PB[6,463]	(A) $x \approx y^6x$ $x^2 \approx x^2y^6$	[123456,214365,351624,462513,536142,645231]	(6,4337)

References

- [1] C. C. Edmunds, E. W. H. Lee, and K. W. K. Lee, Small semigroups generating varieties with continuum many subvarieties, *Order* **27** (2010), no. 1, 83–100.
- [2] E. W. H. Lee, Combinatorial Rees–Sushkevich varieties that are Cross, finitely generated, or small, *Bull. Aust. Math. Soc.* **81** (2010), no. 1, 64–84.
- [3] E. W. H. Lee and J. R. Li, Minimal non-finitely based monoids, *Dissertationes Math. (Rozprawy Mat.)* **475** (2011), 65 pp.
- [4] E. W. H. Lee and W. T. Zhang, Finite basis problem for semigroups of order six, *LMS J. Comput. Math.* **18** (2015), no. 1, 1–129.