

$$F = \frac{t_M^2}{t_M^2 + t_M^2 \sin^2 \gamma} = \frac{t_M^2}{t_M^2 + t_M^2} = 1$$

A A P
2010-11 u u

t_M t_M - 1
G t_M t_M u - 400
t_M t_M - 05

*t*_{M_u} *t*_{M_w} *m* G A
*m*_u # 227 01116

A A A A G
A M u M M Y M
2010-11

M t M t u t M - 05 400

t_M
 t_M
 G
 A
 # 227 01116

A A P A A G
 2010-11 u u t_M Y t_M

t_M
 t_M
 G
 H
 3 400
 05
 t_M Y

A	t _M	(u u A G t _M)										t _M			t _M			
		2011	33%	35%	26%	22%	1 %	21%	*	*	*	*	*	*	35%	21%	21%	
	/ A	2010	32%	33%	26%	16%	1 %	1 %	11%	13%	*	*	*	*	13%	13%	16%	
	t _M	2011	2 %	32%	27%	22%	24%	20%	*	*	*	*	*	*	2 %	21%	1 %	
		2010	2 %	30%	27%	15%	14%	12%	22%	1 %	*	*	*	*	7%	14%	14%	
	t _M	2011	31%	32%	1 %	12%	17%	11%	*	*	*	*	*	*	1 %	12%	12%	
		2010	32%	30%	24%	6%	1 %	%	*	*	*	*	*	*	20%	6 %	%	
			2011	30%	32%	26%	33%	*	32%	*	*	*	*	*	2 %	31%	31%	
			2010	2 %	27%	2 %	25%	43%	*	22%	25%	*	*	*	1 %	23%	20%	
A	t _M	2011	16%	1 %	11%	7%	1 %	4%	*	*	*	*	*	*	6 %	7 %	6 %	
		2010	15%	16%	11%	%	14%	7%	11%	1 %	*	*	*	*	7%	7 %	%	
A	t _M	2011	t _M	(u u A G t _M)														
	/ A	2011	6%	%	2%	%	%	%	*	*	*	*	*	*	%	%	*	
		2010	5%	7%	%	%	*	*	*	*	*	*	*	*	%	%	*	
	t _M	2011	77%	2%	1%	%	%	%	*	*	*	*	*	*	%	%	*	
			2010	75%	75%	7%	6%	*	*	*	*	*	*	*	6%	6%	*	
	t _M	2011	0%	0%	67%	*	*	*	*	*	*	*	*	*	*	*	*	
			2010	0%	3%	3%	*	*	*	*	*	*	*	*	*	*	*	
A	t _M	2011	66%	6 %	71%	2%	0%	%	*	*	*	*	*	*	2%	2 %	*	
		2010	64%	64%	67%	44%	*	*	*	*	*	*	*	*	44%	44 %	*	

t_M t_M G A		A A 2010-11		A A G		t_M Y t_M		t_M t_M G A		t_M t_M G A		t_M t_M G A	
t_M	t_M	t_M	t_M	G	A	t_M	t_M	t_M	t_M	t_M	t_M	t_M	t_M
2011	A	t_M	t_M	(G)	3-11)								
	t_M	.6%	7.7%	.1%	100.0%	100.0%	100.0%	*	-	-	-	*	100.0%
	A	(1)	A	1.0%	.6%	1. %	0.6%	72.2%	3.2%	*	-	*	40.0%
	A	(A)	A	7.6%	.1%	7.1%	.4%	27. %	6. %	*	-	*	60.0%
	A	(A)	Y	2.4%	1. %	1.1%	0.0%	0.0%	0.0%	*	-	*	0.0%
	A	(A)	Y	3.1%	4.6%	3.4%	7.2%	27. %	4.3%	*	-	*	45.0%
	A	(A)	Y	0. %	1.0%	0.0%	0.0%	0.0%	0.0%	*	-	*	0.0%
	A	(A)	Y	1.3%	1.6%	1.0%	2.2%	0.0%	2.6%	*	-	*	15.0%
	A	t_M	t_M	4.0%	4.0%	2.1%	. %	4.4%	. %	*	-	*	5.0%
	A	t_M	t_M	4.6%	3. %	7.0%	10.1%	5.6%	11.1%	*	-	*	15.0%
	A	t_M	t_M	4.6%	3.7%	6. %	10.1%	5.6%	11.1%	*	-	*	15.0%
	A	t_M	t_M	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	*	-	*	0.0%
	A	t_M	t_M	1.4%	2.3%	1.0%	0.0%	0.0%	0.0%	*	-	*	0.0%
	A	t_M	t_M	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	*	-	*	0.0%
	A	t_M	t_M	0. %	1.6%	0.6%	0.0%	0.0%	0.0%	*	-	*	0.0%
	A	t_M	t_M	0.4%	0.5%	0.0%	0.0%	0.0%	0.0%	*	-	*	0.0%
	A	t_M	t_M	3,231,7 0	52,146	2 7	13	1	117	1	0	0	2
2010	A	t_M	t_M	(G)	3-11)								
	t_M	.6%	7.5%	.0%	100.0%	100.0%	100.0%	100.0%	100.0%	-	*	*	100.0%
	A	(1)	A	0. %	.5%	1.6%	2. %	. %	6.5%	. %	.	*	35.3%
	A	(A)	A	7. %	.0%	7.7%	7.1%	11.1%	3.5%	11.1%	11. %	*	64.7%
	A	(A)	Y	2.3%	1. %	0. %	0.0%	0.0%	0.0%	0.0%	0.0%	*	0.0%
	A	(A)	Y	3.3%	4. %	4.1%	5.2%	11.1%	2.3%	5.6%	11. %	*	47.1%
	A	(A)	Y	0. %	0. %	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	*	0.0%
	A	(A)	Y	1.3%	1.5%	1.2%	1. %	0.0%	1.2%	5.6%	0.0%	*	17.6%
	A	t_M	t_M	0.0%	.2%	6.1%	1. %	70.4%	2.6%	4.4%	2.4%	-	*
	A	t_M	t_M	.6%	.3%	11. %	1.2%	2 .6%	17.4%	5.6%	17.6%	-	*
	A	t_M	t_M	4.4%	3.6%	6.3%	13.0%	1 .5%	15.1%	0.0%	5. %	-	*
	A	t_M	t_M	4.2%	5.7%	5.0%	5.2%	11.1%	2.3%	5.6%	11. %	-	*
	A	t_M	t_M	1.4%	2.5%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-	*
	A	t_M	t_M	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-	*
	A	t_M	t_M	0. %	1.7%	0. %	0.0%	0.0%	0.0%	0.0%	0.0%	-	*
	A	t_M	t_M	0.4%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-	*
	A	t_M	t_M	3,175,337	51,533	27	154	27	6	1	17	0	2

A A A A G													5
2010-11													400
G h Y t M													05
# 227 01116													
A A A A G													
2011 2010													
47% 50%													50% 21%
45% 45%													20% *
42% 45%													
40% 40%													
44% 46%													
47% 15%													
20% 20%													
47% 40%													
40% 1%													
44% 15%													
43% 1%													
G h Y t M													
(u G 4-11)													
75 73													
6 1													
7 137													
0 126													
* 1 3													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													
* * * * *													

t_M t_M A
G Y
u # 227 01116

A A P A A G
2010-11 u u t_M Y t_M

t_M t_M - 1
t_M t_M - 400
G h Y - 05
t_M Y

		u		G u		t _M		t _M	
		t _M	t _M	G	t _M				
		400	100.0%		25, 17	5,273	4, 12, 3	5	
t _M	t _M								
t _M	t _M	53	2.0%	0.4%	0.4%	0.4%	0.3%		
t _M	t _M	1	13.3%	11.6%	6.1%	6.1%	4.5%		
t _M	t _M	63	20.3%	14.6%	.0%	.0%	7.6%		
t _M	t _M	5	15. %	15.4%			7. %		
t _M	t _M	4	14.5%	14.6%	.5%	.5%	7.7%		
t _M	t _M	51	12.3%	13. %	.4%	.4%	7.6%		
t _M	t _M	37	12. %	14.6%	7. %	7. %	7.6%		
t _M	t _M	0	.3%	13.5%	7.4%	7.4%	7.6%		
t _M	t _M	0	0.0%	1.4%	6.7%	6.7%	7.4%		
t _M	t _M	0	0.0%	0.0%	6.5%	6.5%	7.3%		
t _M	t _M	0	0.0%	0.0%	6.3%	6.3%	7.2%		
t _M	t _M	0	0.0%	0.0%	7.2%	7.2%	7. %		
t _M	t _M	0	0.0%	0.0%	6.0%	6.0%	7.0%		
t _M	t _M	0	0.0%	0.0%	5.5%	5.5%	6.4%		
t _M	t _M	0	0.0%	0.0%	5.3%	5.3%	5. %		
t _M	t _M	54	13.5%	4.6%	.5%	.5%	12. %		
t _M	t _M	337	4.3%	3.5%	60.3%	60.3%	50.3%		
t _M	t _M	5	1.3%	1.0%	24.3%	24.3%	31.2%		
t _M	t _M	1	0.3%	0.2%	0.3%	0.3%	0.5%		
t _M	t _M	0	0.0%	0.4%	3.3%	3.3%	3.4%		
t _M	t _M	0	0.0%	0.0%	0.1%	0.1%	0.1%		
t _M	t _M	3	0. %	0.2%	2.2%	2.2%	1.6%		
t _M	t _M	30	7.5%	7.6%	64.0%	64.0%	5.2%		
t _M	t _M	13	34.5%	5.2%	2.7%	2.7%	16. %		
t _M	t _M	4	0. %	0.2%	2.0%	2.0%	1. %		
t _M	t _M	21	54.5%	7.6%	4. %	4. %	46.3%		
t _M	t _M	75	24.3%	21.0%	22.6%	22.6%	1.2%		
t _M	t _M	12.	/	16.3	14.0	14.0	14.7		
t _M	t _M								
		u	t _M	t _M		u	t _M	t _M	
		u	t _M	t _M		u	t _M	t _M	
		G	t _M	t _M		G	t _M	t _M	
		u	t _M	t _M		u	t _M	t _M	
G	1	1. %	1.2%	1. %	2.3%	0.0%	7. %	10.6%	10.7%
G	2	7.3%	.6%	3.6%	4.7%	0.0%	14.1%	7. %	.
G	3	0.0%	5. %	2.2%	2. %	16.7%	6.0%	2.4%	4.1%
G	4	1. %	4.3%	1.1%	2.0%	0.0%	1.7%	0. %	1. %
G	5	0.0%	2.1%	0. %	1.1%	0.0%	1.2%	0.1%	0. %
G	6	0.0%	2.2%	0.6%	1.3%	0.0%	1.5%	1.0%	1.3%
G	7	-	0.3%	0.4%	0.7%	-	0.0%	1.2%	1.2%
G		-	-	0.5%	1.0%	-	-	1.2%	1.4%
G		-	-	0.6%	1.2%	-	-	1.2%	2.1%

^t_M_U ^t_M_U ^w_G ^A_A
227 01116

A A A G
A M Y M
2010-11 u

2
400
05
Y

A	v	M	b	t_M	w	t_M
N		G		w	u	t_M
m	t_M	Y	m	t_M	m	t_M
G				1		
G				2		
G				3		
G				4		
G				5		
G_K				6		
M				G		
t_M		Y	m	h	u	$A t_M$

t_M t_M A
u # 227 01116

A A A G
2010-11

t_M t_M - 4
t_M t_M - 400
G h Y - 05
t_M Y

A A A G
(200 -10)

G	t _M	t _M	A	t _M	t _M	A	t _M	t _M	G	t _M	t _M
\$2,465	100.0%	\$7,06	\$3,412,07	100.0%	\$4	\$173,451,730	100.0%	\$6,7			
\$2,07674	73.0%	\$5,173	\$2,37,343	70.0%	\$5,3	\$124,645,433	71. %	\$4,6			
\$157,701	5.5%	\$32	\$170,065	5.0%	\$423	\$7,34,460	4.5%	\$307			
\$52,16	1. %	\$130	\$52,16	1.5%	\$130	\$2,10,64	1.2%	\$3			
\$221,45	7. %	\$551	\$25,442	7.6%	\$643	\$10,7,77	6.2%	\$423			
\$101,253	3.6%	\$252	\$101,253	3.0%	\$252	\$7,00,372	4.5%	\$306			
\$236,34	.3%	\$5	\$442,7	13.0%	\$1,101	\$20,263,724	11.7%	\$74			
\$2,612,30	100.0%	\$6,4	\$2,6,2	100.0%	\$7,36	\$152,27,06	100.0%	\$5,4			
\$1,032,06	3.5%	\$2,567	\$1,032,06	34. %	\$2,567	\$24,31,54	16.3%	\$77			
\$2,61\$						A G					

Y t_M t_M (25)
t_M u t_M u t_M (23)

$$F = \frac{t_M^2}{t_M^2 + t_M^2} \delta_{\mu\nu}, \quad Y = -\frac{t_M^2}{t_M^2 + t_M^2} \eta_{\mu\nu},$$