

June 2001 Paper 1 (P1)

1. $x = 33.2^\circ ; 146.8^\circ$
2. $(2.5, 4) ; (8, -7)$
3. i) $\left(x + \frac{5}{2}\right)^2 + \frac{7}{4}$ (ii) $a = \frac{-5}{2}$ (iii) $x \geq \frac{7}{4}$
4. Proof
5. i) $64 - 192x + 240x^2$ (ii) $a = 4$
6. i) 9 (ii) $\frac{2}{15}(3x+1)^{\frac{5}{2}} + x + C$ (iii) $\frac{77}{15} = 5\frac{2}{15}$
7. i) $3y = 2x + 9$ (ii) 13
8. i) $AD = 6.78\text{cm} ; OD = 9.90\text{cm}$ (ii) 16.1cm (iii) 9.65cm^2
9. i) 729 (ii) 36
10. i) $2 - \frac{24}{x^2} ; \frac{48}{x^3}$ (iii) Minimum
11. i) $\mathbf{a} \cdot \mathbf{b} = 19 ; \angle AOB = 25^\circ$ (ii) $p = 4 ; q = 2$ (iii) 6

Nov 2001 Paper 1 (P1)

1. $k = 10$
2. i) $2(x-3)^2 - 7$ (ii) $f(x) \geq -7$
3. ii) $k = \pi$
4. $4\pi + 8\sqrt{3}$
5. i) $A = 14x^2 ; \frac{dA}{dx} = 28x$ (ii) 0.0025
6. (4, 6)
7. i) $a^2 + b^2 = 5$ (ii) $\tan \theta = \frac{4}{7} ; \theta = 29.7^\circ ; 209.7^\circ$
8. i) 775kg (ii) 17,600kg (iii) 20,000kg
9. i) $y = \frac{-12}{x^2} - 3x + 31$ (ii) (2, 22)
10. $\overrightarrow{MN} = -3\mathbf{i} - 8\mathbf{j} + 4\mathbf{k} ; \overrightarrow{MD} = -6\mathbf{i} + 8\mathbf{j} + 8\mathbf{k}$
11. i) $5y = 4x - 13$ (ii) (0, 2.6) (iii) $\frac{16}{15} \text{ unit}^2$ OR 1.07 unit^2

June 2001 Paper 6 (S1)

1. 715
2. Mean = 157 ; Standard Deviation = 88.0
3. i) (ii) 0.21 (iii) 0.571
4. i) 0.281 (ii) 11
5. $p_0 = 0.2$; $p_1 = 0.35$; $p_2 = 0.45$
6. i) (ii) LQ = 1400 ; Median = 2000 ; UQ = 3300 (iii) Many more used cars at lower prices.
7. i) 0.0359 (ii) 208 (iii) 0.987

Nov 2001 Paper 6 (S1)

1. Mean = 13.1 ; Standard Deviation = 2.76
2. a) 151 200 (b) 144
3. i) $\frac{41}{50} = 0.82$ (ii) $\frac{12}{41} = 0.293$
4. ii) 0.172 OR 0.170
5. i) 0.117 (ii) T = 20.4 (iii) 23
6. i) 0.849 (ii) 0.0519
7. ii) $P(X = 0) = 0.167$; $P(X = 1) = 0.5$; $P(X = 2) = 0.3$; $P(X = 3) = 0.0333$
(iii) 1.2 ; 0.56

June 2002 Paper 1 (P1)

1.	(12, -1.5) and (-3, 6).
2.	(i) Proof; (ii) 60° and 300° .
3.	(i) (9, 9); (ii) 13.5 unit^2 .
4.	(i) 750; (ii) 40.5.
5.	(i) $4\mathbf{i} - 6\mathbf{k}$, $4\mathbf{i} + 4\mathbf{j} + 6\mathbf{k}$; (ii) 109.7° .
6.	(i) $a = 5$ and $b = -3$; (ii) 0.64, 2.50; (iii) Sketch.
7.	(i) Proof; (ii) 371 cm^2 ; (iii) 502 cm^2 .
8.	(i) $h = \frac{192 - r^2}{2r}$; (ii) 8; (iii) 1610, maximum.
9.	(i) $7\frac{2}{3}$; (ii) $y = 7 - \frac{6}{2x+1}$; (iii) 0.4 units per second.
10.	(i) $7\frac{1}{2}$; (ii) Sketch; (iii) $f^{-1}(x) = \frac{1}{3}(x-2)$, $g^{-1}(x) = \frac{6-3x}{2x}$, $x = 2$ or $-4\frac{1}{2}$.

November 2002 Paper 1 (P1)

1.	54.
2.	(i) $a = 27$, $r = \frac{2}{3}$; (ii) 81.
3.	(i) Proof; (ii) 34.0 cm.
4.	(i) $y = \frac{1}{3}(1+2x)^{\frac{3}{2}} + 2$; (ii) $\frac{7}{3}$.
5.	(i) Proof; (ii) 30° , 150° .
6.	(i) $AC = \frac{1}{2}AB$, $BC = l$, Proof; (ii) Proof.
7.	(i) 103.8° ; (ii) $-\frac{3}{11}$.
8.	(i) $3x^2 + 6x - 9$; (ii) $x = -3$ or 1 ; (iii) $k = -27$ or 5 .
9.	(i) $2y = x+11$; (ii) $C(13, 12)$; (iii) 35.8 or $16\sqrt{5}$.
10.	(i) $y + 2x = 12$; (ii) $9\frac{1}{3}$.
11.	(i) $a = 2$, $b = 2$, $c = -18$; (ii) $x = -2$, $y = -18$; (iii) $x \geq 2$, $x \leq -6$; (iv) -2; (v) $f^{-1}(x) = \sqrt{\frac{x+18}{2}} - 2$.

June 2002 Paper 6 (S1)

1.	not independent, not mutually exclusive.
2.	
3.	(i) a 1 4 9 16; (ii) 5.33, 30.9. $P(A = a)$ $\frac{1}{2}$ $\frac{1}{6}$ $\frac{1}{6}$ $\frac{1}{6}$
4.	(i) 108, 13.4; (ii) 0.431.
5.	(i) 2520; (ii) 360; (iii) 1440.
6.	(i) 3.6, 2; (ii) 0.879.
7.	(i) 20, 0.162; (ii) 0.837.

November 2002 Paper 6 (S1)

1.	(ii) $a = 0.15$, $b = 0.3$.
2.	(ii) $\frac{5}{72}$.
3.	(i) 0.334; (ii) 49.9.
4.	(ii) 162; (iii) 688 747 536 or 689 000 000.
5.	(i) 0.429; (ii) 0.31.
6.	(i) 0.0584; (ii) 0.307; (iii) 0.829.
7.	(i) LQ 72 or 73 or 71.5, Median 78, UQ 88 or 87.75; (iii) 'people heavier in P than Q ', or 'weights more spread out in Q than P ', or ' P is negatively skewed, Q is positively skewed or more symmetrical'.

June 2003 Paper 1 (P1)

1.	-40 .
2.	$38.9^\circ, 98.9^\circ, 158.9^\circ$.
3.	(a) $4 - \frac{12}{x^3}$; (b) $2x^2 - \frac{6}{x} + c$.
4.	542.5 .
5.	(i) $a = 2, b = -3$; (ii) 2.25 .
6.	(i) Sketch; (ii) $k = \frac{6}{\pi}$; (iii) $(-\frac{1}{2}\pi, -3)$.
7.	(i) $2y = x + 1$; (ii) 4.47 or $\sqrt{20}$.
8.	(i) Proof; (ii) Proof, 2:5.
9.	(i) 68.5 cm^2 ; (ii) 0.381 ; (iii) Proof.
10.	(i) $\frac{5}{6}$; (ii) 0.025 ; (iii) 2.53 or $\frac{38}{15}$.
11.	(i) $16 - (x - 4)^2$, $a = 16, b = -4$; (ii) $(4, 16)$; (iii) $-2 \leq x \leq 10$; (iv) Domain $x \leq 16$, range $g^{-1}(x) \geq 4$; (v) $g^{-1}(x) = 4 + \sqrt{16 - x}$.

November 2003 Paper 1 (P1)

1.	$(1.5, 8)$ and $(4, 3)$.
2.	(ii) $30^\circ, 150^\circ, 210^\circ, 330^\circ$.
3.	(a) $\$61.50$; (b) 18 .
4.	(i) $y = x^3 - 2x^2 + x + 5$; (ii) $x < \frac{1}{3}$ and $x > 1$.
5.	(i) $2y = x + 8, y + 2x = 29$; (ii) $(10, 9)$.
6.	(ii) $A = 10r - r^2$; (iii) 3.96 cm .
7.	(i) 4 units; (ii) $\vec{MC} = 3\mathbf{i} - 6\mathbf{j} - 4\mathbf{k}$, $\vec{MN} = 6\mathbf{j} - 4\mathbf{k}$; (iii) $-20, 111^\circ$.
8.	(i) $y = \frac{36}{x^2}$; (ii) $x = 3$; (iii) $A = 108 \text{ cm}^2$, minimum.
9.	(i) $8y + 3x = 14$.
10.	(i) $1\frac{1}{3}$; (ii) $f^{-1}(x) = \frac{1}{2}(x + 5)$, $g^{-1}(x) = \frac{2x - 4}{x}$; (iv) Sketch - symmetry about $y = x$.

June 2003 Paper 6 (S1)

1.	(i) false zero; (ii)(b) 79.
2.	(ii) $P(0) = \frac{7}{15}$, $P(1) = \frac{7}{15}$, $P(2) = \frac{1}{15}$; (ii) $\frac{3}{5}$.
3.	(i) 0.321; (ii) 14.3 .
4.	(i) 0.0829; (ii) 0.275 .
5.	(i) 120; (ii) 186; (iii) 90.
6.	(i) $\frac{3}{8}$; (ii) $\frac{17}{42}$; (iii) $\frac{10}{17}$.
7.	(i) 18.4, 13.3; (ii) frequency densities 2.2, 4.0, 3.2, 1.8, 1.0, 0.2 or scaled frequencies usually of 11, 20, 16, 9, 5, 1.

November 2003 Paper 6 (S1)

1.	0.850, 0.978.
2.	
3.	8.91, 23.6.
4.	(i) 0.774; (ii) 0.204; (iii) 0.0451.
5.	0.746.
6.	(a)(i) 18 564, (ii) 6188; (b)(i) 40 320, (ii) 2880.
7.	(i) 0.3735 (0.374); (ii) 0.0419; (iii) box plot is skew, not symmetric so not normal.
8.	(i) $\frac{1}{18}$ or 0.0556; (ii) 2.78, 1.17; (iii) 0.611.

June 2004 Paper 1 (P1)

1.	(ii) $\frac{3}{4}$; (ii) 242.
2.	$1\frac{5}{9}$.
3.	(i) $\tan^2 \theta + 3 \tan \theta - 4 = 0$; (ii) $45^\circ, 104.0^\circ$.
4.	(i) 160; (ii) -20.
5.	(i) 21.5 cm^2 ; (ii) 20.6 cm.
6.	(i) (2, 6) and (-3, 11); (ii) $y = x + 9$.
7.	(i) $y = 2x - 9$; (ii) 18π .
8.	(i) $h = 4 - r - \frac{1}{2}\pi r$; (iii) 1.12 or $\frac{8}{4 + \pi}$; (iv) maximum.
9.	(i) $\begin{pmatrix} \frac{1}{3} \\ -\frac{2}{3} \\ \frac{2}{3} \end{pmatrix}$; (ii) 10; (iii) 5 or -7.
10.	(i) $x < -3$ and $x > 5$; (ii) $f(x) \geq -1$, f does not have an inverse.

November 2004 Paper 1 (P1)

1.	1080
2.	i) 239 (ii) 3280
3.	$18\sqrt{3} - 6\pi$
4.	ii) 2
5.	ii) Q(0.5, 5.25) (iii) 2.25
6.	i) $a = 3$; $b = 2$ (ii) 0.524; 2.62 (iii) $3 \leq f \leq 5$
7.	i) $x + 2y = 9$ (ii) $y = 3\sqrt{4x - 3} - 6$
8.	i) 0.907 radians (ii) $\frac{1}{12}(-8\mathbf{i} + 4\mathbf{j} + 8\mathbf{k})$
9.	i) $x = 5$ (ii) $a = 16$ (iii) $p = 3$; $q = 9$ (iv) $h^{-1}(x) = \sqrt{x + 9} + 3$; $x \geq -9$
10.	i) $2x - \frac{2}{x^2}$; $2 + \frac{4}{x^3}$ (ii) (1, 3), Minimum (iii) 14.2π OR 44.6

June 2004 Paper 6 (S1)

1.	(i) 139, 83.1; (ii) team B, smaller standard deviation.																					
2.	(ii) Between 40 and 70 if a curve was drawn, or between 60 and 70 if a polygon was drawn.																					
3.	(i)	<table border="1"><tr><td>x</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td></tr><tr><td>P(X = x)</td><td>$\frac{11}{36}$</td><td>$\frac{9}{36}$</td><td>$\frac{7}{36}$</td><td>$\frac{5}{36}$</td><td>$\frac{3}{36}$</td><td>$\frac{1}{36}$</td></tr></table>	x	1	2	3	4	5	6	P(X = x)	$\frac{11}{36}$	$\frac{9}{36}$	$\frac{7}{36}$	$\frac{5}{36}$	$\frac{3}{36}$	$\frac{1}{36}$	(ii) $E(X) = \frac{91}{36} = 2.53.$					
x	1	2	3	4	5	6																
P(X = x)	$\frac{11}{36}$	$\frac{9}{36}$	$\frac{7}{36}$	$\frac{5}{36}$	$\frac{3}{36}$	$\frac{1}{36}$																
4.	(i) 0.203; (ii) 481.																					
5.	(a)(i) 90, (ii) 69; (b) 252 252.																					
6.	(ii) 0.247; (iii) $\frac{5}{19} = 0.263.$																					
7.	(i) 0.398; (ii) 9; (iii) 0.972.																					

November 2004 Paper 6 (S1)

1.	i) 90 720	(ii) 720	
2.	i) 40	(ii) $\frac{15}{17} = 0.882$	
3.	i) 0.072	(ii) 0.25	
4.	i) 13.2	(ii) 48 ; 13.4	
5.	i) 48.6	(ii) 0.00438	
6.	i) 0.4	(ii) 0.3	(iii) $P(X = 3) = 0.1$; $P(X = 4) = 0.3$; $P(X = 5) = 0.6$ iv) $E(L) = 4.5$; $\text{Var.}(L) = 0.45$
7.	ii) 0.419	(ii) 0.0782	

June 2005 Paper 1 (P1)

1.	$y = \frac{2x^3}{3} - 5x + 5$
2.	$-\frac{8}{3}$
3.	ii) 71.6° ; 251.6°
4.	i) $64 - 192x + 240x^2$ (ii) 1.25
5.	M(4, 6); A(-8, 0); C(16, 12)
6.	175; 205
7.	i) $1 \leq f \leq 5$ (iii) 90 (iv) $\sin^{-1}\left(\frac{3-x}{2}\right)$
8.	ii) 43.3 (iii) 117 cm^2
9.	i) 14.4 (ii) 8 unit^2
10.	ii) $x < 1.5$ (iii) $(-1, 8); (2, 3)$ (iv) $3\frac{3}{4} = 3.75$
11.	i) 99° (ii) $\frac{1}{7}(2\mathbf{i} - 6\mathbf{j} + 3\mathbf{k})$ (iii) $p = -7 \text{ or } 5$

November 2005 Paper 1 (P1)

1.	90° ; 131.8°
2.	i) 62.4 cm^2 (ii) 0.65
3.	i) 4d
4.	ii) $q = 5 \text{ or } -3$
5.	i) $h = 12 - 2r$ (iii) $64\pi \text{ or } 201 \text{ cm}^2$
6.	i) 369 000 (ii) 3 140 000 (iii) 14 300
7.	i) $3x + 2y = 31$ (ii) (7, 5)
8.	i) $6(2x - 3)^2$ (ii) $\frac{\sqrt[3]{x+8}+3}{2}$; $-7 \leq x \leq 117$
9.	i) $(1.5, 8); (4, 3)$ (ii) $-\sqrt{96} < k < \sqrt{96}$ (iii) 8.1°
10.	i) $y = 12 - \frac{8}{x^2}$ (ii) $x + 2y = 22$ (iii) 8 unit^2

June 2005 Paper 6 (S1)

1.	0.677
2.	ii) 16.1
3.	ii) $P(X=0)=0.2373$; $P(X=1)=0.3955$; $P(X=2)=0.2637$; $P(X=3)=0.0879$; $P(X=4)=0.0146$; $P(X=5)=0.0010$;
4.	ii) LQ = 5.4 ; Median = 6.5 ; UQ = 8.3
5.	i) $\frac{206}{427}=0.482$ (ii) $\frac{412}{1281}=0.322$ (iii) Not independent (iv) $\frac{179}{282}=0.635$
6.	i) 0.00429 (ii) 1.71 to 2.09
7.	i) 15 (ii) 75 (iii) 90 720 (iv) 120

November 2005 Paper 6 (S1)

1.	
2.	i) 0.252 (ii) 0.440
3.	i) 259 459 200 (ii) 3 628 800 (iii) 0.986
4.	i) 44.1 (ii) 14.0
5.	i) 0.132 (ii) 0.0729 (iii) 0.0100 (iv) $\frac{5}{3}$; $\frac{10}{9}$
6.	i) \$2 (iii) $P(X=4)=0.2$; $P(X=2)=0.288$; $P(X=0)=0.184$; $P(X=-1)=0.328$ (iv) \$1.05
7.	i) 5080 (ii) 0.0273 (iii) 0.730

June 2006 Paper 1 (P1)

1.	$k = 12$
2.	54.2° ; 144.2°
3.	i) \$8 140 (ii) 71 000
4.	$N = 5$; $a = -0.5$; $b = 20$
5.	3.75
6.	i) $3\sqrt{3}$
7.	ii) 47.3 (iii) 50.8 OR 50.9
8.	i) $4\mathbf{i} + 4\mathbf{j} + 5\mathbf{k}$ $\sqrt{57} \approx 7.55$ (iii) 43.7°
9.	i) (8.5, 4.25) (ii) $y = 16 - 4\sqrt{6 - 2x}$
10.	i) $k = 27$ (ii) (-1, 32) (iii) $-1 < x < 3$ (iv) 33.75
11.	i) $k = 4$, $x = 1$; $k = -8$, $x = -5$ (ii) $x = 7$ (iii) $g^{-1}(x) = \frac{9}{x} - 2$

Nov 2006 Paper 1 (P1)

1.	60.
2.	(i) $\frac{21}{25}$; (ii) $\frac{4}{21}$.
3.	$a = 54$, $b = 24$.
4.	(i) 36.7° ; (ii) $\frac{1}{3}\mathbf{i} - \frac{2}{3}\mathbf{j} + \frac{2}{3}\mathbf{k}$.
5.	(i) $2y + 3x = 48$; (ii) $D(10, 9)$.
6.	(a) 10 836; (b)(i) 96, (ii) 432.
7.	(i) $1\frac{2}{3}$.
8.	(i) $1\frac{1}{3}$; (ii) 0.015 units per second.
9.	(iii) $1\frac{2}{3}$; (iv) Maximum.
10.	(i) $x < -1$ and $x > 4$; (ii) $a = 1\frac{1}{2}$, $b = 2\frac{1}{4}$; (iii) $f(x) \hat{=} 2\frac{1}{4}$; (iv) no inverse, f not one-one; (v) $x = 25$.

June 2006 Paper 6 (S1)

1.	Median = \$47 000 Data are skewed. OR Existence of an outlier.																
2.	i) $x = \frac{7}{16} = 0.4375$ (ii) $\frac{3}{10} = 0.3$																
3.	i) 7.29 (ii) 0.136 (iii) 0.370																
4.	i) 4.94×10^{11} (ii) 79 833 600 OR 79 800 000 (iii) 21																
5.	i) 30 – 35 years (ii) 24 (iii) 110 (iv) $\frac{3}{11} = 0.273$																
6.	i) 16 (ii) 8 (iv) Mean = $1\frac{15}{16} = 1.9375$; Variance = $1\frac{15}{256} = 1.43$																
	<table><tr><td>Matches</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr><tr><td>Frequency</td><td>16</td><td>8</td><td>4</td><td>2</td><td>2</td></tr></table>					Matches	1	2	3	4	5	Frequency	16	8	4	2	2
	Matches	1	2	3	4	5											
Frequency	16	8	4	2	2												
7.	i) 0.126 (ii) 0.281																

Nov 2006 Paper 6 (S1)

1.	
2.	(i) 0.15; (ii) 1.56, 1.41.
3.	(i) 54 minutes.
4.	(i) $\frac{1}{3}$; (ii) $\frac{5}{9}$.
5.	(ii) 12.9; (iii) 7.
6.	(i) 362 880; (ii) 151 200; (iii) 64.
7.	(i) 0.117; (ii) 0.00361; (iii) 0.556.

June 2007 Paper 1 (P1)

1. 0.5
2. 42π
3. –
4. 1.5, -1.5
5. (i) $4\sqrt{3}$ (ii) $48\sqrt{3} - 24\pi$
6. (i) $3y + 2x = 20$ (ii) C(10, 0) ; D(14, 6)
7. (i) 6 (ii) -450
8. (i) a = 3 and b = -4 (ii) 0.36 and 2.78 (iii) graph
9. (i) $\frac{1}{7} \begin{pmatrix} 2 \\ 3 \\ -6 \end{pmatrix}$ (ii) m = -2, n = 3, k = -8
10. (i) $2 - \frac{16}{x^3}; \frac{48}{x^4}$ (ii) (2, 6) $\frac{d^2y}{dx^2} = +ve(\text{minimum})$ (iv) 7
11. (i) $-12(2x + 3)^{-2}$; always negative (ii) $\frac{1}{2} \left(\frac{6}{x} - 3 \right); 0 < x \leq 2$ (iv) x = 1

Nov 2007 Paper 1 (P1)

1. $k < -4$
2. 9.33
3. (i) $32 + 80u + 80u^2$ (ii) 160
4. (i) $a + 4d$ and $a + 14d$ (iii) 2.5
5. (ii) 70.5 or 289.5
6. (6.2, 9.6)
7. (ii) $18 - 6\sqrt{3} + 2\pi$
8. (i) $6(2x - 3)^2 - 6; 24(2x - 3)$ (ii) $x = 2$ (2nd diff = +ve ---- MIN);
 $x = 1$ (2nd diff = -ve ---- MAX)
9. (i) $4x - \frac{1}{2}x^2 + 3$ (ii) $2y + x = 20$ (iii) (7, 6.5)
10. (i) $\begin{pmatrix} 2 \\ 2 \\ 2 \end{pmatrix}; \begin{pmatrix} -2 \\ 2 \\ 4 \end{pmatrix}$ (ii) 61.9 or 1.08 rad (iii) 12.8
11. (i) $f(x) = 2(x - 2)^2 + 3$ (ii) ≥ 3 (iii) Not one-one (iv) $A = 2$
(v) $2 - \sqrt{\frac{x-3}{2}}; \leq 2$

June 2007 Paper 6 (P6)

1. 33.8 ; 2.3
2. (i) 0.8 (ii) 0.625
3. (a) 7.24 or 7.23 (b) 546 (accept 547)
4. (ii) 15.6
5. (i)(a) 9980000 (i)(b) 181000 (ii) 15
6. (i) 0.365 (accept 0.364) (ii) 0.576
7. (i) 0.273 (iii)

x	0	1	2	3
P(x)	14/55	28/55	12/55	1/55

Nov 2007 Paper 6 (P6)

1. (i) 12 (ii) 8.88
2. (i) 1/6 (ii) 4/3 ; 68/9
3. (i) 120 (ii) 48
4. (i) 0.595 (ii) 0.573
5. (i) some trains were up to 2 minutes early
(ii) median = 2.1 to 2.4; IQR = 3.2 to 3.6
6. (i) 0.298 (ii) 0.118 (iii) 13
7. (i) 7/60 (ii) 47/60 (iii) 40/47 (iv)

x	0	1	2
P(x)	3/60	17/60	40/60

June 2008 Paper 1 (P1)

1. $6\sqrt{6}$
2. (ii) 60 and 300
3. (i) $32 + 80x^2 + 80x^4$ (ii) 272
4. (i) 2 or $3/2$ (ii) 2
5. (i) 25.9 (ii) 15.3
6. (i) $9(3x + 2)^2$; $f'(x)$ always positive
(ii) $\frac{\sqrt[3]{x+5} - 2}{3}$; $x \geq 3$
7. (i) $2/3$ (ii) 243 (iii) 270
8. (i) 5 or -7 (ii) -4 or 8
9. (i) $k = 32$, $c = 2$ (ii) 7.2
10. (i) -2 (ii) 40 (iii) 0.5 or 3.5
11. (i) (4, 6) (ii) (6, 10) (iii) 40.9

June 2008 Paper 6 (P6)

1. (i) 24; 16 (ii) 5
2. (i) 0.2 (ii) 0.42 (iii) 0.667
3. (i) 2180000 (ii) 90
4. (i) 8.75 (ii) 0.546
5. (i) fd : 22, 30, 18, 30, 14 time: 0.05, 0.55, 1.05, 2.05, 3.05, 4.55
(ii) 2.1
6. (ii)

x	0	1	2	3	4
P(x)	1/2	1/4	1/8	1/16	1/16

(iii) $15/16$
7. (i) 0.00563 (ii) 0.526 (iii) 0.956