ADDITIONAL MATHEMATICS

ANSWER FOR PAPER 1

1. Answer: (a) $\{5,6,7,8,9\}$ (b) $\{6,8,9\}$

2. Answer: 4

3. Answer: $h = 8$, $k = 9$

4. Answer: $m = -\frac{1}{3}n$

5. Answer: $m = \frac{1}{2}$

6. Answer: $\theta = 20.45^0$, 110.45^0

7. Answer: $h = 18$, $k = 8$

8. Answer: $m = -2$, 1

9. Answer: 6 720

10. Answer: 0.75 or $\frac{3}{4}$

11. Answer: $m = \frac{1}{2}$

12. Answer: 1.8 or $1\frac{4}{5}$

13. Answer: 30^0 , 150^0 , 270^0

14. Answer: (a) 0.12 (b) 0.32

15. Answer:
(a) $p = 10$ (b) $x = -3$

16. Answer: $3x^2 + 3y^2 + 10x - 4y + 3 = 0$

17. Answer: $m = -\frac{1}{2}$, $c = \frac{9}{2}$

18. Answer: m = 2

19. Answer: (a) k = 2 (b) y = 2x + 4

20. Answer: (a) $-\frac{56}{65}$ (b) $-\frac{16}{63}$

21. Answer: $\frac{1}{8}$

22. Answer: (a) $\frac{14}{15}$ (b) $\frac{1}{15}\times\frac{3}{7}=\frac{1}{35}$

23. Answer: (a) 1.154 (b) 0.3757

24. Answer: m = $\frac{1}{4}$, p = 10

25. Answer: x = $14^0 29^/$, $165^0 31^/$

ANSWER FOR PAPER 2

1. Answer : x = 3 , $y=\frac{1}{2}$ *and* $x=-5, y=\frac{25}{2}$

2. Answer: (a) y = $-\frac{2}{3}x+6$ (b) Q (0,6) (c) 2y = 3x + 12

3. Answer: (a) Cos 75^0 = Cos ($30^0 + 45^0$)
(b) 15^0 , 75^0 , 135^0 , 195^0 , 255^0 or 255^0

4. Answer: (a) k(x) = x^2 – 2x + 4 (b) x = 2 , $-\frac{1}{2}$ (c) 7

5. Answer: (a) (i) r = 2 (ii) n = 10 (b) (i) d = 1 (ii) T_{18} = 28.5^0

6. Answer : (a) (i) 0.3456 (ii) P (X ≥ 4) = P (X=4) + P(X=5) = 0.337
(b) P (X ≥ 1) > 0.95
1 – P (X = 0) > 0.95 , n = 4

7. Answer : (a)

x	1	2	3	4	5	6
$\frac{y}{x}$	19.1	15.85	13.1	9.95	7.04	4.08

(b) (i) h = - 3 (ii) k = 22

8. Answer: (a) (i) $y = -\frac{2}{3}x + 8$ (ii) (6,4) (b) (-3,10)

(c) $3x^2 + 3y^2 - 48x - 42y + 183 = 0$

9. Answer: (a) 58.071 (b) (i) 62.625 (ii) 6.04

10. Answer: (a) 18.456 cm (b) 6.277 cm^2

11. Answer : (a) (i) $4h\underline{x} - 6h\underline{y}$ (ii) $3k\underline{x} + \left(\frac{15k}{8} - 6\right)\underline{y}$

(b) $h = \frac{12}{17}$, $k = \frac{16}{17}$

12. Answer : (a) $x - y \leq 10$, $x + 4y \leq 60$, $2x + y \geq 40$ (c) (i) $x - 2y = 17 - 2(7) = 13$

(a) (ii) y = 10 , max. X = 20 , k = 20/10 = 2

(iii) x = 20 , y = 10 , max. value 3x + y = 3(20)+10 = 70

13. Answer: (a) v = 9 ms^{-1} (b) t =1 or 3 s (c) a = 12 ms^{-2} (d) v = - 3 ms^{-1}

14. Answer: (a) 3.910 cm (b) $40^0 7'$ (c) 15.39 cm^2

15. Answer : (a) k = RM2 , n = RM0.46 , m = RM125

(b) 122

(c) RM4.27