Answers

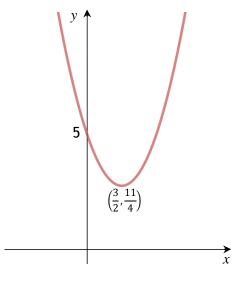
Paper 1

- Q1. $4\frac{6}{35}$
- Q2. (a) (2x + y)(2x y) (b) $\frac{2x y}{3}$
- Q3. On average the number of cigarettes smoked per person went down after the course since 9.6 < 20.8.

However, the number of cigarettes smoked per person before the course was more consistent since 8.5 < 12.0.

- Q4. (a) y = 2x + 3 (b) 43
- Q5. $3\sqrt{2}$
- Q6. *x* > 3
- Q7. $y = (x 1)^2 4$
- Q8. (a) $m = -\frac{1}{2}$ (b) c = 3
- Q9. 121°
- Q10. a = 30
- Q11. 750 grams
- Q12. (a) $b^2 4ac < 0$ therefore no real roots

(b)
$$y = \left(x - \frac{3}{2}\right)^2 + \frac{11}{4}$$
 (c)



Q13. (a) 150 m^2 $(\sin 90^\circ = 1)$

(b) 12 metres

Answers

Paper 2

Q1. 3.12×10^8 kilometres

Q2.	£25 073.75					
Q3.	x = c(b - a) (or equivalent)					
Q4.	$x = \frac{5}{2}, y = \frac{3}{2}$ (or $x = 2.5, y = 1.5$)					
Q5.	550 cubic centimetres (to 2 SF)					
Q6.	27 centimetres					
Q7.	(a)	124°	(b)	305 metres (to 3 SF)		
Q8.	$\frac{2x-7}{(x+1)(x-2)}$					
Q9.	2230.5 grams (to 1 decimal place)					
Q10.	(a)	14 diagonals	(b)	proof	(c)	13 sides
Q11.	(a) 3.87 metres (1 decimal place)					
	(b)	150.6 seconds (c)	209.4	seconds		
Q12.	(a)	AQ = x + 3				
		r+3 $4(r+3)$ 4				

(b) $PQ = \frac{x+3}{6} \times 8 = \frac{4(x+3)}{3} = \frac{4}{3}x + 4$ as required.