

**Answers  
Paper 1**

**1**  $fg(x) = 12x + 5$

- 2** (a)  $\{-4, -3, -2, -1, 0, 1, 2\}$   
(b)  $\{-4, -2, 0, 2\}$

**3**

(a)  $\frac{7}{2}$  or  $-\frac{2}{3}$                       (b)  $-3$  or  $-\frac{4}{3}$

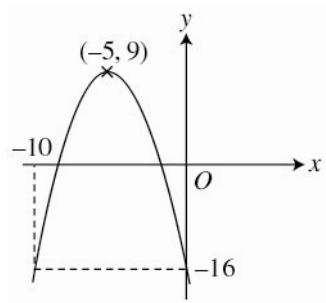
**4** 9

**5** 66

**6**

$h = 3, k = \frac{1}{3}$

**7**



**8**

(a)  $x < -\frac{2}{3}$  or  $x > 2$

(b)  $\frac{2}{7} \leq x \leq 3$

**9**

$y = x^3 - 4x^2 + 8x - 5$

**10** (a)  $-31$   
(b)  $-116$

**11**  $2 \sec x$

**12**  $151\,200$

**13**  
 $\frac{3}{5}$

**14**  $27.43\%$

**15**  $1.04$

**16**  $y = -4x + 3$

**17**  $x < -4$  or  $x > \frac{1}{2}$

**18**  $10$

**19**  $m = 9$  or  $-15$

**20** (a)  $1.474$                       (b)  $1.15$

**21**  $3.239$

**22**  $8x^2 + 8y^2 - 52x + 10y + 73 = 0$

**23**  
 $31\frac{1}{2}$  units<sup>2</sup>

**24** 6.098

**25** (a) 4 cm

(b)  $12.2 \text{ cm}^2$