

Brief Answers to Grade Grabber 2

Answer 1

(i) $7 (2x + 3)$

(ii) $(x + 4) (x + 7)$

(iii) $(x + 7) (x - 7)$

By the difference of two squares

[1, 2, 2 marks]

Answer 2

$x = -3, y = 5$

[4 marks]

Answer 3

(i) 31.1 cm^2

(ii) 10.4 cm

[2, 2 marks]

Answer 4

£ 392 540

[2 marks]

Answer 5

(a) (i) 47

(ii) 85

(iii) 100

(iv) 158

[1, 1, 1, 2 marks]

(b)

$-\frac{8}{3}$

(c)

$f^{-1}(x) = \frac{x - 8}{3}$

[2, 2 marks]

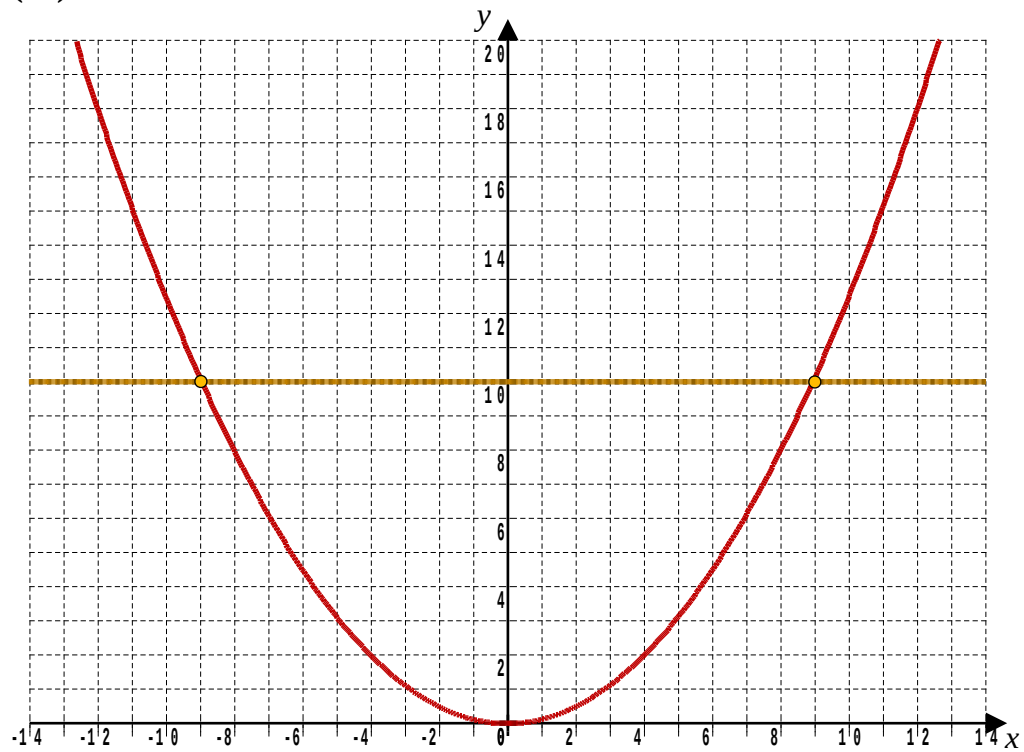
Answer 6

(i)

x	-12	-8	-4	-2	0	2	4	8	12
$y = 0.125x^2$	18	8	2	0.5	0	0.5	2	8	18

[2 marks]

(ii)



[2 marks]

(iii) Gold line added to graph

[1 mark]

(iv) About $(-9, 10)$ and $(9, 10)$

[2 marks]

(v) Exact answers are $(-4\sqrt{5}, 10)$, $(4\sqrt{5}, 10)$

This is, more approximately, $(\pm 8.94, 10)$

[2 marks]

Answer 7

(a) $9x^2 + 24x + 16$

[2 marks]

(b)

$$\begin{aligned}(3x + 4)^2 &= (3x + 3)^2 + x^2 \\ 9x^2 + 24x + 16 &= 9x^2 + 18x + 9 + x^2 \\ x^2 - 6x - 7 &= 0\end{aligned}$$

[3 marks]

(c) $x = 7$ which means the sides are 25 cm, 24 cm and 7 cm

[2 marks]