

11.2 Solutions to the Homework

GCSE Mathematics Functions I

Answer 1

- (i) 19 (ii) 84 (iii) 4 (iv) 3 (v) 39
(vi) 39 (vii) 10003 (viii) 3.25 (ix) 5.25 (x) 8

[6 marks]

Answer 2

- (i) -2 (ii) To avoid a division by zero (which is not defined).

[1, 2 marks]

Answer 3

- (i) 37 (ii) 4 (iii) 57 (iv) 7 (v) 3

[5 marks]

Answer 4

- (i) 195 (ii) $400x^2 - 1$ (iii) $4x^2 + 24x + 35$

[1, 2, 3 marks]

Answer 5

3

Answer 6

17

[3, 3 marks]

Answer 7

- (i) 81 (ii) -3 (iii) $126z + 39$ (iv) $168z + 81$

[1, 1, 2, 2 marks]

Answer 8

- (a) (i) $f(x) = 9x - 36$ (ii) $f^{-1}(x) = \frac{x}{9} + 4$
(b) (i) 36 (ii) 9

[1, 2, 1, 1 marks]

Answer 9

- (a) Diagram contains **Subtract 8**, then **Multiply by 7**

- (b) $\frac{x}{7} + 8$ (c) (i) 63 (ii) 13

[1, 2, 1, 1 marks]

Answer 10

$7x + 21$

Answer 11

$\frac{1}{3}$

[4, 5 marks]

Answer 12

$$f^{-1}(x) = \frac{13}{5(x - 4)}$$

Answer 13

$$f^{-1}(x) = \frac{11 + 2x}{x - 1}$$

[4, 5 marks]