

10.2 Solutions to the Revision

GCSE Mathematics Functions I

Answer 1

- (i) 8 (ii) 63 (iii) 0 (iv) -1 (v) 24
(vi) 24 (vii) 9999 (viii) $-\frac{3}{4}$ (ix) $\frac{5}{4}$ (x) 1

[6 marks]

Answer 2

- (i) -1 (ii) To avoid a division by zero (which is not defined).

[1, 2 marks]

Answer 3

- (i) 37 (ii) 10 (iii) 19 (iv) 4 (v) 5

[5 marks]

Answer 4

- (i) 146 (ii) $300x^2 - 1$ (iii) $3x^2 + 24x + 47$

[1, 2, 3 marks]

Answer 5

3

Answer 6

14

[3, 3 marks]

Answer 7

- (i) 91 (ii) 11 (iii) $80z + 31$ (iv) $60z + 51$

[1, 1, 2, 2 marks]

Answer 8

- (a) (i) $f(x) = 7x - 3$ (ii) $f^{-1}(x) = \frac{x + 3}{7}$
(b) (i) 32 (ii) 5

[1, 2, 1, 1 marks]

Answer 9

- (a) Diagram contains **Subtract 9**, then **Multiply by 5**.

- (b) $\frac{x}{5} + 9$ (c) (i) 15 (ii) 14

[1, 2, 1, 1 marks]

Answer 10

$5x - 35$

Answer 11

-1

[4, 5 marks]

Answer 12

$$f^{-1}(x) = \frac{8}{3(x - 7)}$$

Answer 13

$$f^{-1}(x) = \frac{5 - 3x}{x - 1}$$

[4, 5 marks]