

2.4.3 Solutions to 2.4 Homework

GCSE Mathematics Functions I

Answer 1

- (i) 37 (ii) -83 (iii) 7

[3 marks]

Answer 2

- (i) 6 (ii) -12 (iii) 18

[3 marks]

Answer 3

- (i) 3 (ii) 5 (iii) 0
(iv) The square root of a negative number is not a real number

[4 marks]

Answer 4

- (i) 243 (ii) 15 (iii) 18

[3 marks]

Answer 5

- (i) 36 (ii) 0 (iii) $\frac{3}{8}$

[3 marks]

Answer 6

- (i) 2 (ii) 48 (iii) $\frac{6}{13}$
(iv) Division by zero is not defined

[4 marks]

Answer 7

- (i) 363 (ii) $3w^2 + 6w + 3$ (iii) $12x^2$

[3 marks]

Answer 8

- (i) 68 (ii) $27w^3 + 3w$ (iii) $x^6 + x^2$

[3 marks]

Answer 9

- (i) 197 (ii) $w^2 + 8w + 17$ (iii) $9x + 1$

[3 marks]

Answer 10

$$\begin{aligned}(2x + 1)^3 &= 1 \times (2x)^0 \times (1)^3 \\ &+ 3 \times (2x)^1 \times (1)^2 \\ &+ 3 \times (2x)^2 \times (1)^1 \\ &+ 1 \times (2x)^3 \times (1)^0 \\ \\ &= 1 + 6x + 12x^2 + 8x^3\end{aligned}$$

[3 marks]