



Function Notation



REVISE THIS
TOPIC

1 $f(x) = 6x - 1$

$g(x) = 8x^2$



1 (a) Work out the value of $f(10)$

[1 mark]

$$6(10) - 1$$

Answer

59

1 (b) Work out the value of $g(5)$

[1 mark]

$$8 \times 5^2$$

Answer

200

1 (c) Work out the value of $f(-2) + g(2)$

[2 marks]

$$6(-2) - 1 = -13$$

$$8 \times 2^2 = 32$$

$$-13 + 32$$

$$= 19$$

Answer

19

1 (d) Work out the value of $f(0.5) - g(0.5)$

[2 marks]

$$6(0.5) - 1 = 2$$

$$8 \times 0.5^2 = 2$$

$$2 - 2 = 0$$

Answer

0





2

$f(x) = 9 - x^2$

$g(x) = \frac{3}{x}$

$h(x) = 2^x$



- 2 (a) Work out the value of
- $f(-2)$

[1 mark]

$$9 - (-2)^2$$

Answer 5

- 2 (b) Work out the value of
- $g(0.5)$

[1 mark]

$$3 \div 0.5$$

Answer 6

- 2 (c) Work out the value of
- $h(4)$

[1 mark]

$$2^4$$

Answer 16

- 2 (d) Work out the value of
- $f(\sqrt{3})$

[2 marks]

$$9 - (\sqrt{3})^2$$
$$= 9 - 3$$

Answer 6

- 2 (e) Work out the value of
- $g(4) + h(-2)$

[2 marks]

$$\frac{3}{4} + 2^{-2} = \frac{3}{4} + \frac{1}{4}$$

Answer 1



3

$$f(x) = x^2 + 6x - 40$$

$$g(x) = \frac{1}{x-4}$$

$$h(x) = \sqrt{2x-3}$$



- 3 (a) Work out the value of
- $f(2)$

[1 mark]

$$2^2 + 6(2) - 40$$

$$\text{Answer } -24$$

- 3 (b) Work out the value of
- $g(7)$

[1 mark]

$$\frac{1}{7-4}$$

$$\text{Answer } \frac{1}{3}$$

- 3 (c) Work out the value of
- $h(26)$

[1 mark]

$$\sqrt{2(26)-3} = \sqrt{49}$$

$$\text{Answer } 7$$

- 3 (d) Work out the value of
- $g\left(\frac{23}{5}\right)$

[2 marks]

Give your answer as a mixed number.

$$\frac{1}{\frac{23}{5}-4} = \frac{1}{\frac{23}{5}-\frac{20}{5}} = \frac{1}{\frac{3}{5}} = \frac{5}{3}$$

$$\text{Answer } 1\frac{2}{3}$$

- 3 (e) Work out the value of
- $f(10) \times g(10)$

[2 marks]

$$10^2 + 6(10) - 40 = 120$$

$$\frac{1}{10-4} = \frac{1}{6}$$

$$120 \times \frac{1}{6} = 20$$

$$\text{Answer } 20$$

