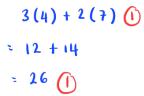
- 1 c = 4d = 7
 - (a) Work out the value of 3c + 2d



(2)

$$p = -6$$
$$m = -2$$

(b) Work out the value of $2p^2 + 3m$

$$2(-6)^{2} + 3(-2)$$
 (1)
$$2(36) - 6$$

$$72 - 6$$

$$66$$
 (1)

66 (2)

There are 6 eggs in a small box of eggs. There are 12 eggs in a large box of eggs.

Alex buys g small boxes of eggs and h large boxes of eggs. He buys a total of T eggs.

(c) Write down a formula for T in terms of g and h.

Alex buys:

small eggs = 69
large eggs : 12 h

Total, T = 69 + 12 h

T = 6g + 12 h

(Total for Question 1 is 7 marks)

$$P = 7w - 5y$$

2 (c) Find the value of P when w = 2 and y = 4

$$\beta = 7w - 5y$$

$$= 7(2) - 5(4)$$

$$= 14 - 20$$

$$= -6$$

$$P =$$
 (2)

$$Q=2u^2-5$$

(d) Find the value of Q when u = -3

$$Q = 2 u^{2} - 5$$

$$= 2(-3)^{2} - 5$$

$$= 2(9) - 5$$

$$= 13$$

(Total for Question 2 is 4 marks)

$$P = 2a + 3b$$

3 (b) Work out the value of P when a = 5 and b = 8

$$P = 2a + 3b$$

(c) Work out the value of a when P = 16 and b = 20

$$16 = 2a + 3(20)$$
 (i)
 $2a = 16 = 60$ (i)
 $2a = -44$
 $a = -22$ (i)

(Total for Question 3 is 5 marks)

4
$$w = 5y^2 - y^3$$

(a) Work out the value of w when y = -2

$$W = 5(-2)^{2} - (-2)^{3}$$

$$= 5(4) - (-8)$$

$$= 20 + 8$$

$$= 28$$

$$w = \frac{28}{(2)}$$

$$t = ab - c$$

 $a = 1.5$ $b = 2.4$ $c = -5.6$

5 (b) Work out the value of *t*.

$$t = ab - c$$

$$= (1.5)(2.4) - (-5.6)$$

$$= 3.6 - (-5.6)$$

$$= 3.6 + 5.6$$

$$= 9.2$$

$$t = \frac{\mathbf{q} \cdot \mathbf{z}}{(2)}$$

$$A = 8x - 3y$$

6 (b) Work out the value of A when x = 5 and y = 4

$$A = \dots (2)$$

(Total for Question 6 is 2 marks)

$$Q = 5v^2 - w$$

7 (d) Work out the value of Q when $v = \frac{1}{2}$ and $w = \frac{1}{4}$

$$Q = 5\left(\frac{1}{4}\right)^2 - \frac{1}{4}$$

$$= 5\left(\frac{1}{4}\right) - \frac{1}{4}$$

$$=\frac{5}{4}-\frac{1}{4}=\frac{4}{4}$$

۷.

$$Q = \frac{1}{(2)}$$

(Total for Question 7 is 2 marks)

$$A = 3b - 5c$$

8 (b) Work out the value of A when b = 12 and c = 4

(c) Solve 4p + 9 = 24

$$4\rho = 24 - 9$$
 (1)
 $\rho = \frac{15}{4}$ (1)

(Total for Question 8 is 4 marks)

T = 5m - 6n

9 (c) Work out the value of T when m = 4.2 and n = -2.5

10
$$p = t - ac$$

$$t = 18$$

$$a = -3$$

$$c = 5$$

(a) Work out the value of p

T = 5g + 4r

11 (c) Work out the value of r when T = 46 and g = 17

$$4r = -39$$
 $r = -39$
 $= -9.75$

$$r = \dots$$
 (3)

 $P = m^2 - 4c$

(d) Work out the value of P when m = -5 and c = 3

$$\beta = (-5)^{2} - 4(3)$$

$$= 25 - 12$$

$$= 13$$

$$P =$$
 (2)

12 (c) Work out the value of $x^2 + 5y$ when x = -3 and y = 2

19

(2)

(Total for Question 12 is 2 marks)