Name: _____

GCSE (1 - 9)

Substitution

Instructions

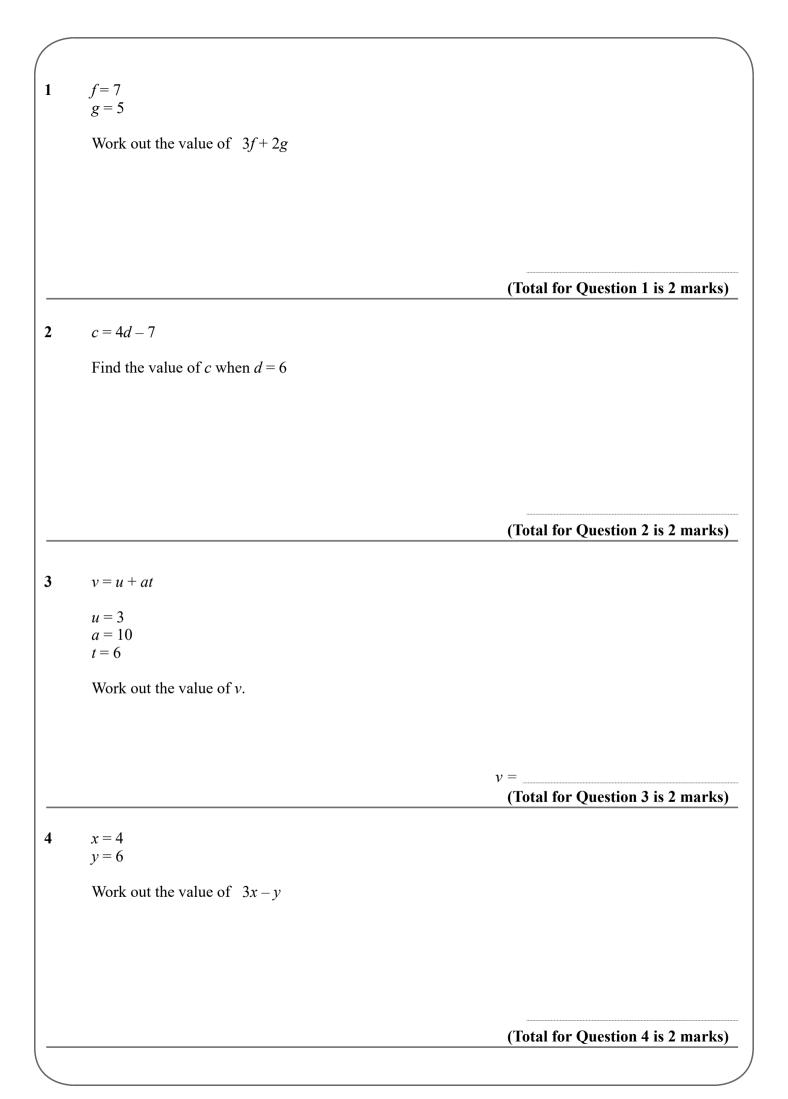
- Use black ink or ball-point pen.
- Answer all Questions.
- Answer the Questions in the spaces provided
- there may be more space than you need.
- Diagrams are NOT accurately drawn, unless otherwise indicated.
- You must show all your working out.

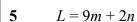
Information

- The marks for each Question are shown in brackets
- use this as a guide as to how much time to spend on each Question.

Advice

- Read each Question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every Question.
- Check your answers if you have time at the end





Work out the value of L when m = 3 and n = -6

(Total for Question 5 is 2 marks)

6 q = 5p + 3r

$$p = 6$$

$$r = -4$$

Work out the value of q.

(Total for Question 6 is 2 marks)

7 H = 4f + g

Work out the value of H when f = 5 and g = -2

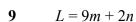
(Total for Question 7 is 2 marks)

$$8 A = 4p + 5q$$

$$p = 3$$
$$q = -2$$

Work out the value of A.

(Total for Question 8 is 2 marks)



Work out the value of L when m = -3 and n = 4

(Total for Question 9 is 2 marks)

10 q = 6p - r

$$p = -4$$

$$r = 5$$

Work out the value of q.

(Total for Question 10 is 2 marks)

11 H = f - 2g

Work out the value of H when f = 12 and g = -6

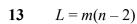
(Total for Question 11 is 2 marks)

12
$$A = 5p + 6q$$

$$p = 10$$
$$q = -2$$

Work out the value of A.

(Total for Question 12 is 2 marks)



Work out the value of L when m = 9 and n = 5

(Total for Question 13 is 2 marks)

14 a = 5bc

$$b = -4$$

$$c = -3$$

Work out the value of *a*.

(Total for Question 14 is 2 marks)

15 $x = 4y^2 - 12$

Work out the value of x when y = 5

(Total for Question 15 is 2 marks)

16
$$A = p - 2q$$

$$p = -4$$

$$q = -7$$

Work out the value of A.

(Total for Question 16 is 2 marks)



Work out the value of $b^2 - 4ac$

(Total for Question 17 is 2 marks)

$$18 d = \frac{m}{v}$$

Work out the value of d when m = 32 and v = 8

(Total for Question 18 is 2 marks)

19
$$A = 2j - jk$$

Work out the value of A when j = 7 and k = 3

(Total for Question 19 is 2 marks)

20
$$w = 5x^2 + 3$$

$$x = -3$$

Work out the value of w.

(Total for Question 20 is 2 marks)

21
$$A = \frac{1}{2}bh$$

Work out the value of A when b = 3 and h = 8

(Total for Question 21 is 2 marks)

22 $A = \frac{1}{2}(a+b)h$

Work out the value of A when a = 7, b = 6 and h = 10

(Total for Question 22 is 2 marks)

23 v = u + at

Work out the value of v when u = 12, a = -6 and t = 5

(Total for Question 23 is 2 marks)

$$24 y = mx + c$$

$$m = -2$$

$$x = 12$$

c = -7

Work out the value of *y*.

(Total for Question 24 is 2 marks)

25
$$s = ut + \frac{1}{2}at^2$$

$$u = 3$$

$$a = 2$$

$$t = 4$$

Work out the value of *s*.

$$s =$$

(Total for Question 25 is 2 marks)

26
$$s = ut + \frac{1}{2}at^2$$

$$u = -5$$

$$a = 4$$

$$t = 3$$

Work out the value of *s*.

27
$$s = \frac{v^2 - u^2}{2a}$$

$$v = 7$$

$$u = 5$$

$$a = 3$$

Work out the value of *s*.