

Substitution

Question Paper

Level	GCSE
Subject	Maths
Exam Board	Edexcel GCSE
Topic	Substitution
Grade Level	Grade 3
Booklet	Question Paper

Time Allowed: 63 minutes

Score: /52

Percentage: /100

Grade Boundaries:

1. $P = 3n$
 $n = 6$

(a) Work out the value of P .

$P = \dots\dots\dots$ (1)

$Q = 2c + d$
 $c = 3$
 $d = 2$

(b) Work out the value of Q .

$Q = \dots\dots\dots$ (2)

(Total 3 marks)

2. $p = 5$
 $r = 2$

(a) Work out the value of

$4p + 3r$

$\dots\dots\dots$ (2)

n is an even number.

(b) What type of number is $n + 1$?

$\dots\dots\dots$ (1)

(Total 3 marks)

3. $y = 5x - 3$

Find the value of y when $x = 9$

$y = \dots\dots\dots$

(2)

(Total 2 marks)

4. $P = 4k - 10$

$k = 7$

(a) Work out the value of k .

$\dots\dots\dots$

(2)

$y = 4n - 3d$

$n = 2$

$d = 5$

(b) Work out the value of y .

$\dots\dots\dots$

(2)

(Total 4 marks)

5. $v = u + 10t$

Work out the value of v when

$u = 10$ and $t = 7$

$v = \dots\dots\dots$

(Total 2 marks)

6.



Take **two** 5 ml spoons full
twice a day

You can work out the amount of medicine, c ml, to give to a child by using the formula

$$c = \frac{ma}{150}$$

m is the age of the child, in months.
 a is an adult dose, in ml.

A child is 30 months old.
An adult's dose is 40 ml.

Work out the amount of medicine you can give to the child.

..... ml

(Total 2 marks)

7. $V = 3b + 2b^2$

Find the value of V when $b = 4$

.....

(Total 2 marks)

8. (a) Work out the value of $3p + 4q$ when $p = 5$ and $q = -2$

.....

(2)

(b) Given that $y = 4x - 3$, work out the value of x when $y = 11$

$x =$

(3)

(Total 5 marks)

9. Work out the value of $5x + 1$ when $x = -3$

.....

(2)

(Total 2 marks)

10. (a) Work out the value of $3x - 4y$ when $x = 3$ and $y = 2$

.....

(2)

(b) Work out the value of $\frac{p(q-3)}{4}$ when $p = 2$ and $q = -7$

.....

(3)

(Total 5 marks)

11. $S = 2p + 3q$

$$p = -4$$

$$q = 5$$

(a) Work out the value of S .

$$S = \dots\dots\dots (2)$$

$$T = 2m + 30$$

$$T = 40$$

(b) Work out the value of m .

$$m = \dots\dots\dots (2)$$

(Total 4 marks)

12. $A = 4bc$

$$A = 100$$

$$b = 2$$

Work out the value of c .

$$c = \dots\dots\dots (2)$$

(Total 2 marks)

13. (a) Work out the value of $2a + ay$ when $a = 5$ and $y = -3$

.....

(2)

(b) Work out the value of $5t^2 - 7$ when $t = 4$

.....

(3)

(Total 5 marks)

14. $A = \frac{h(x+10)}{2}$

$A = 27$

$h = 4$

Work out the value of x

$x = \dots\dots\dots$

(Total 3 marks)

15. $h = 5t^2 + 2$

(i) Work out the value of h when $t = -2$

.....
(3)

(ii) Work out a value of t when $h = 47$

.....
(3)
(Total 5 marks)

16. $V = 3b + 2b^2$

Find the value of V when $b = -4$

(3)

.....
(Total 3 marks)