



Substitution

1

 = 4  = 5



Use the given facts to work out the calculations.

a)  +  + 

b)  +  - 

c)  +  +  +  + 

2

 = 12  = 5

Use the given facts to work out the calculations.

a)  - 

b)  × 

c) Create your own calculation that will be equal to 22

3

If $x = 5$, write the values of the expressions in the corresponding grid.

The first one has been done for you.

$3x$	x^2	$2x - 5$
$4x + 2$	$\frac{x}{2}$	$2(x + 1)$
$7x$	$x + 9$	$x - 7$

15		

4

If $a = 10$ and $b = 6$, work out the values of the expressions.

a) $a + b =$

d) $2a + b =$

b) $a - b =$

e) $3a - 17 =$

c) $2a =$

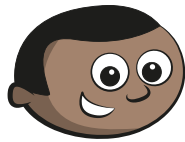
f) $2(a - b) =$

5

If $m = \frac{4}{5}$ and $k = 0.1$, work out the value of $m + 2k$



6



Mo

It does not matter what p and q are, $p + q$ and $q + p$ will always give the same answer.

Do you agree with Mo? _____

Explain your answer.

7

$m = 7 \quad n = 5$

Write $>$, $<$ or $=$ to compare the expressions.

a) $2m$ 10

b) $n - 1$ 5

c) $2n + m$ $2m + n$

d) $7n$ $5m$

8

$a = 10$

Write the expressions in order, starting with the smallest value.

$5a$

$a + 5$

$\frac{a}{5}$

a^2

9

$a = 15$

Write three different algebraic expressions that give a value of 40

10

Complete the table.

x	$5x$	$5x - 1$
2		
10		
12		
	25	
		34
		99



Substitution

1

$$\text{Orange Pentagon} = 4 \quad \text{Yellow Circle} = 5$$

Use the given facts to work out the calculations.

a) $\text{Orange Pentagon} + \text{Orange Pentagon} + \text{Yellow Circle}$

13

b) $\text{Orange Pentagon} + \text{Orange Pentagon} - \text{Yellow Circle}$

3

c) $\text{Yellow Circle} + \text{Yellow Circle} + \text{Yellow Circle} + \text{Orange Pentagon} + \text{Orange Pentagon}$

23

2

$$\text{Purple Triangle} = 12 \quad \text{Red Square} = 5$$

Use the given facts to work out the calculations.

a) $\text{Purple Triangle} - \text{Red Square}$

7

b) $\text{Purple Triangle} \times \text{Red Square}$

60

c) Create your own calculation that will be equal to 22

e.g. $\triangle + \square + \square$

3

If $x = 5$, write the values of the expressions in the corresponding grid.

The first one has been done for you.

$3x$	x^2	$2x - 5$
$4x + 2$	$\frac{x}{2}$	$2(x + 1)$
$7x$	$x + 9$	$x - 7$

15	25	5
22	2.5	12
35	14	-2

4

If $a = 10$ and $b = 6$, work out the values of the expressions.

a) $a + b = 16$

d) $2a + b = 26$

b) $a - b = 4$

e) $3a - 17 = 13$

c) $2a = 20$

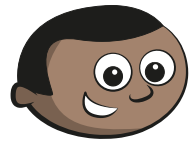
f) $2(a - b) = 8$

5

If $m = \frac{4}{5}$ and $k = 0.1$, work out the value of $m + 2k$

1

6



Mo

It does not matter what p and q are, $p + q$ and $q + p$ will always give the same answer.

Do you agree with Mo? Yes

Explain your answer.

Addition is commutative.

7

$$m = 7 \quad n = 5$$

Write $>$, $<$ or $=$ to compare the expressions.

a) $2m$ $>$ 10

b) $n - 1$ $<$ 5

c) $2n + m$ $<$ $2m + n$

d) $7n$ $=$ $5m$

8

$$a = 10$$

Write the expressions in order, starting with the smallest value.

$$5a$$

$$a + 5$$

$$\frac{a}{5}$$

$$a^2$$

$$\frac{a}{5}$$

$$a + 5$$

$$5a$$

$$a^2$$

9

$$a = 15$$

Write three different algebraic expressions that give a value of 40

e.g.

$$2a + 10$$

$$3a - 5$$

$$\frac{8a}{3}$$

10

Complete the table.

x	$5x$	$5x - 1$
2	10	9
10	50	49
12	60	59
5	25	24
7	35	34
20	100	99

