Substitution

1

$\pentagon$ = 4 $\bigcirc$ = 5

Use the given facts to work out the calculations.

a) $\pentagon$ + $\pentagon$ + $\bigcirc$

$\boxed{13}$

b) $\pentagon$ + $\pentagon$ − $\bigcirc$

$\boxed{3}$

c) $\bigcirc$ + $\bigcirc$ + $\bigcirc$ + $\pentagon$ + $\pentagon$

$\boxed{23}$

2

$\triangle$ = 12 $\blacksquare$ = 5

Use the given facts to work out the calculations.

a) $\triangle$ − $\blacksquare$

$\boxed{7}$

b) $\triangle$ × $\blacksquare$

$\boxed{60}$

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

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

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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) $a + b =$ $\boxed{16}$ **d)** $2a + b =$ $\boxed{26}$

b) $a - b =$ $\boxed{4}$ **e)** $3a - 17 =$ $\boxed{13}$

c) $2a =$ $\boxed{20}$ **f)** $2(a - b) =$ $\boxed{8}$

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

$\boxed{1}$

6

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

Mo

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.

| $5a$ | $a + 5$ | $\dfrac{a}{5}$ | a^2 |

| $\dfrac{a}{5}$ | $a + 5$ | $5a$ | a^2 |

9

$a = 15$

Write three different algebraic expressions that give a value of 40

e.g.

$2a + 10$ $\qquad$ $3a - 5$ $\qquad$ $\dfrac{8a}{3}$

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