Substitution

1

= 4 = 5

Use the given facts to work out the calculations.

a) + +

13

b) + −

3

c) + + + +

23

2

= 12 = 5

Use the given facts to work out the calculations.

a) −

7

b) ×

60

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

e.g. + +

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

b) $a - b =$ 4

c) $2a =$ 20

d) $2a + b =$ 26

e) $3a - 17 =$ 13

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

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

1

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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.

$2a+10$ $\quad$ $3a-5$ $\quad$ $\frac{8a}{3}$

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

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