

Algebra Year 6

For today's task you will need to substitute the value of the letter in the sums in order to answer the question.

Example

$$T + 5 = 20$$

$$20 - 5 = 15$$

T is 15

If a letter and a number are joined together with no other symbol in between, then multiply these two together.

Example

$$3T = 18$$

$$18 \text{ divided by } 3 = 6$$

T is 6

If the answer is given but the letter value is not, we use the inverse to find out what the number is worth. This means working back from the answer using the opposite calculation.

For example, if you had the question **$5G + 12 = 62$**

We need to do the following:

$62 - 12$ because subtraction is the opposite of addition and we are working backwards.

$$62 - 12 = 50$$

We know that the $5G$ we started with totals 50.

Because the 5 and the G are next to each other, they have been multiplied together. The inverse of this is to divide.

Our second step is therefore to do 50 divided by 5 which gives us 10.

$$G = 10$$

Have a go at the questions below:

1. Use simple formulae.

a) Calculate the value of the letter in each equation:

$3a = 12$	$a =$
$30 = 5b$	$b =$
$8c = 72$	$c =$
$48 = 12d$	$d =$

b) Calculate the value of the letter in each equation:

$20 = 4h + 4$	$h =$
$3i + 5 = 11$	$i =$
$14 = 6j - 4$	$j =$
$2k - 5 = 5$	$k =$

c) In these equations, **a** is worth 7. Calculate the value of each shape:

$\triangle = 3a$	$\triangle =$
$4 + a = \text{pentagon}$	$\text{pentagon} =$
$\diamond = 10 - a$	$\diamond =$
$a + a = \square$	$\square =$

Answers below:

1a) 4 6 9 4

1b) 4 2 3 5

1c) 21 11 3 14