

Solve simple one-step equations



- 1 Write an equation for each part-whole model.
Work out the value of the multilink cube in each equation.

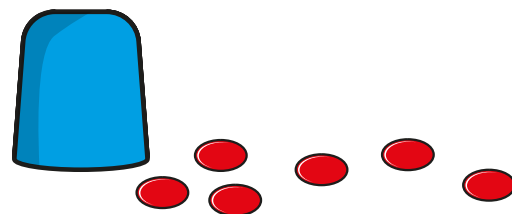
a)

A part-whole model with a top circle containing the number 6. It branches down to three circles, each containing a green multilink cube. To the right of the model is a horizontal line and an equation: $\text{cube} = \square$.

b)

A part-whole model with a top circle containing the number 18. It branches down to two circles. The left circle contains a green multilink cube, and the right circle contains four red cubes. To the right of the model is a horizontal line and an equation: $\text{cube} = \square$.

- 2 There are some counters under the cup.

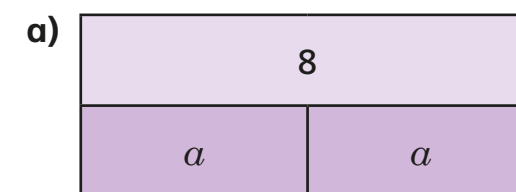


There are 10 counters in total.

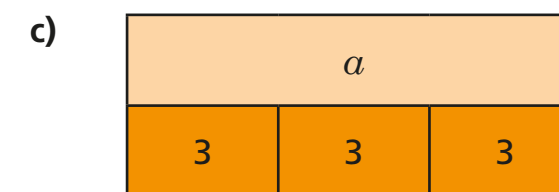
- a) If c is the number of counters under the cup, explain why
 $c + 6 = 10$
- b) Work out the value of c . $c = \square$
- c) How many counters are under the cup? \square



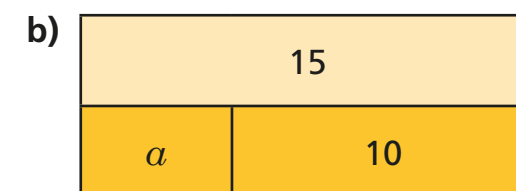
- 3 Write algebraic equations to represent the bar models.
Find the value of a in each one.



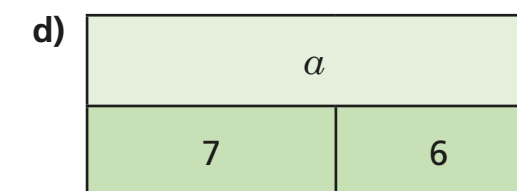
$$a = \square$$



$$a = \square$$



$$a = \square$$



$$a = \square$$

- 4 Nijah is solving the equation $x - 8 = 20$

$$\begin{aligned} x - 8 &= 20 \\ x &= 20 - 8 \\ x &= 12 \end{aligned}$$

What mistake has Nijah made?

5 Solve the equations.

a) $x + 7 = 20$

$x =$

b) $10y = 80$

$y =$

c) $4m = 22$

$m =$

d) $g - 3 = 15$

$g =$

e) $32 = t - 5$

$t =$

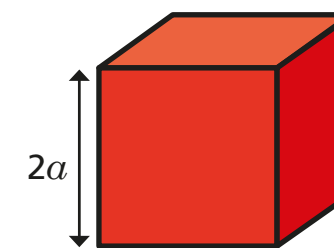
f) $\frac{u}{6} = 3$

$u =$

6 Filip thinks of a number.
He subtracts 5 from his number.
He ends up with 10
Write an algebraic equation to represent Filip's problem.

Solve the equation to work out his number.

7 Dexter builds a tower.
Each block is $2a$ high.
He uses 7 blocks.



The total height of his tower is 42 cm.
Write an equation to represent the height of Dexter's tower and find the value of a .

$a =$ cm

8 Work out the value of each shape.
Write the equations that you solved to find the value of each shape.

				= 40
				= 20
				 32

=

=

=

Work out the missing total of each row and column.
Compare answers with a partner.

