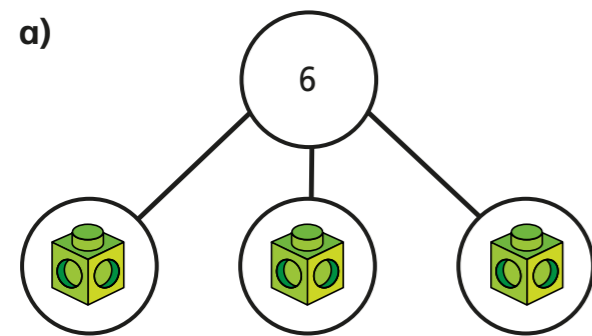


# Solve simple one-step equations

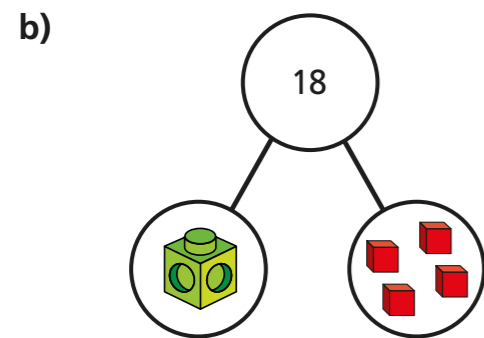


1 Write an equation for each part-whole model.

Work out the value of the multilink cube in each equation.

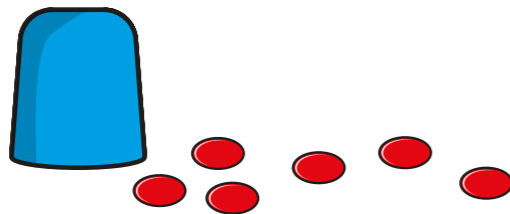


$$3x = 6$$



$$x + 4 = 18$$

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  $c$ .

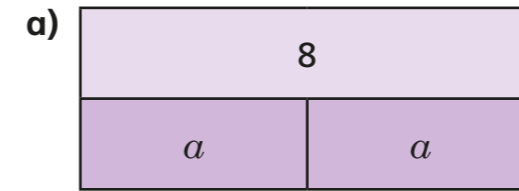
$$c = 4$$

c) How many counters are under the cup?

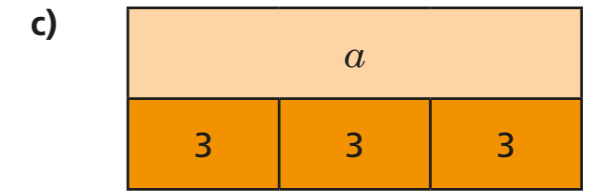
$$4$$

3 Write algebraic equations to represent the bar models.

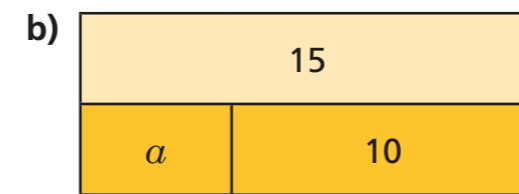
Find the value of  $a$  in each one.



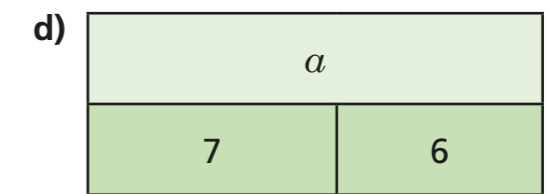
$$a = 4$$



$$a = 9$$



$$a = 5$$



$$a = 13$$

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?

She should have added 8 to 20

$x = 28$

5 Solve the equations.

a)  $x + 7 = 20$

$x = 13$

d)  $g - 3 = 15$

$g = 18$

b)  $10y = 80$

$y = 8$

e)  $32 = t - 5$

$t = 37$

c)  $4m = 22$

$m = 5.5$

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

$u = 18$

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.

$x - 5 = 10$

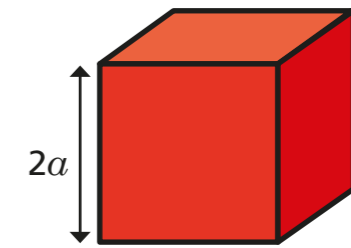
Solve the equation to work out his number.

$15$

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  $a$ .

$14a = 42$

$a = 3$  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				

♥ =  $10$

★ =  $6$

▲ =  $2$

Work out the missing total of each row and column.

Compare answers with a partner.

