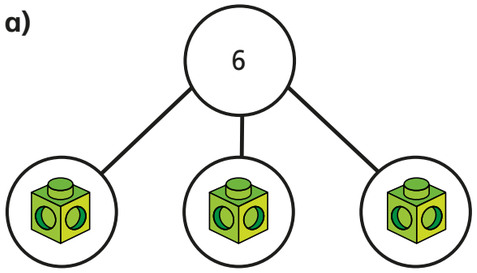
Solve simple one-step equations

1 Write an equation for each part-whole model.

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

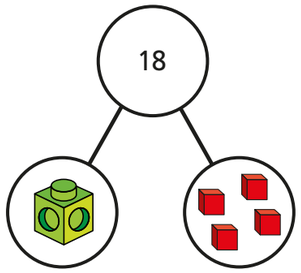
a)



$3x = 6$

= 2

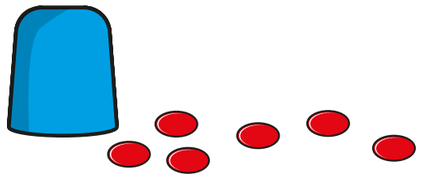
b)



$x + 4 = 18$

= 14

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 $c + 6 = 10$

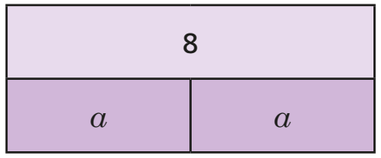
b) Work out the value of c. c = 4

c) How many counters are under the cup? 4

3 Write algebraic equations to represent the bar models.

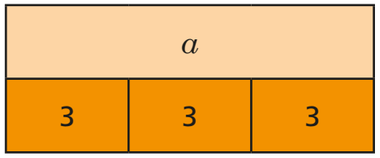
Find the value of a in each one.

a)



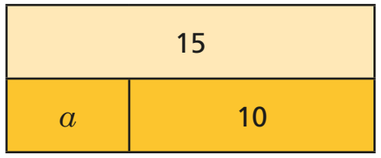
a = 4

c)



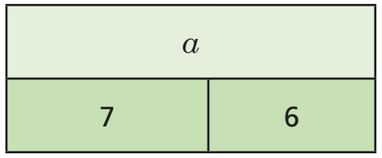
a = 9

b)



a = 5

d)



a = 13

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

$x - 8 = 20$

$x = 20 - 8$

$x = 12$

What mistake has Nijah made?

She should have added 8 to 20

$x = 28$

© White Rose Maths 2019

5 Solve the equations.

a) $x + 7 = 20$

$x =$ 13

b) $10y = 80$

$y =$ 8

c) $4m = 22$

$m =$ 5·5

d) $g - 3 = 15$

$g =$ 18

e) $32 = t - 5$

$t =$ 37

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.

$x - 5 = 10$

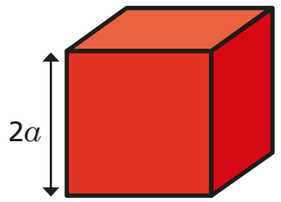
Solve the equation to work out his number.

15

7 Dexter builds a tower.

Each block is $2a$ high.

He uses 7 blocks.



The total height of his tower is 42 cm.

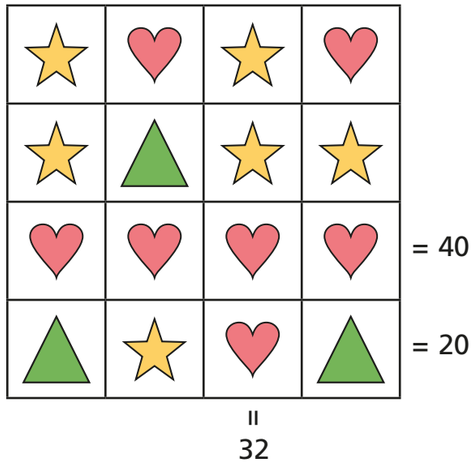
Write an equation to represent the height of Dexter's tower and find the value of a.

$14a = 42$

$a =$ 3 cm

8 Work out the value of each shape.

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



♥ = 10 ★ = 6 ▲ = 2

Work out the missing total of each row and column.

Compare answers with a partner.

© White Rose Maths 2019