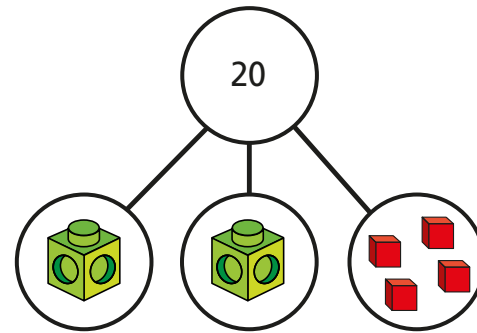# Solve two-step equations

1 Here is a part-whole model.
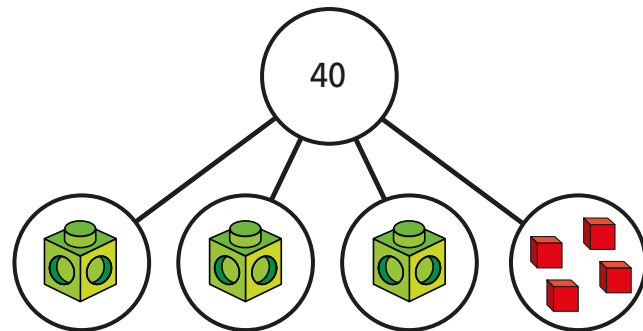
20

a) Write an equation for the part-whole model.

$2x + 4 = 20$

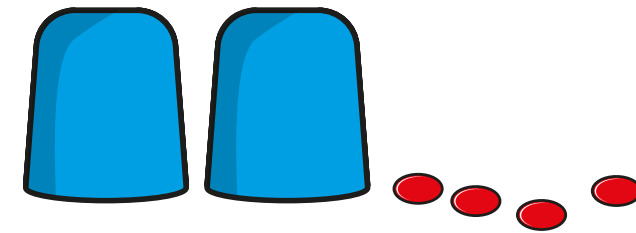**b)** Solve the equation to work out the value of

= 8

2 If each multilink cube represents x, form and solve an equation to find the value x.

40

$x =$ 12

3 There is the same number of counters under each cup.

There are 16 counters in total.

a) Use y to represent the number of counters under each cup.
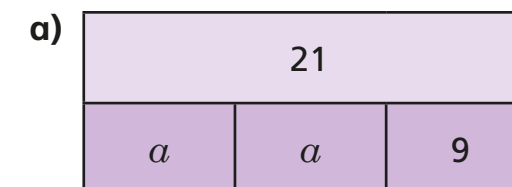
Write an equation in terms of y.

$2y + 4 = 16$
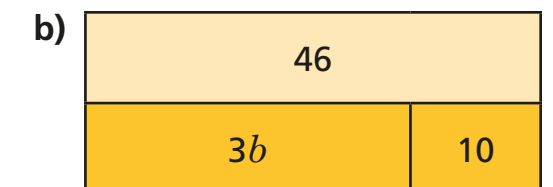
b) Solve the equation to find the value of y.

$y =$ 6

c) How many counters are under each cup?

6

4 Write an algebraic equation to represent each bar model.

Find the values of a and b.

a)

21		
a	a	9

b)

46	
$3b$	10

$a =$ 6

$b =$ 12

5 Solve the equations.

a) $5x + 1 = 31$

$x = \boxed{6}$

b) $3x - 3 = 9$

$x = \boxed{4}$

c) $4p - 11 = 3$

$p = \boxed{3.5}$

d) $9 = 2y + 8$

$y = \boxed{0.5}$

e) $10g - 2 = 46$

$g = \boxed{4.8}$

f) $4 + 3y = 28$

$y = \boxed{8}$

6 Dani thinks of a number.
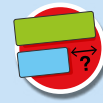
She doubles it and adds 3

She gets the answer 15

a) Write an equation to represent Dani's problem.

$\underline{2x + 3 = 15}$

b) Solve the equation to find her number.

$\boxed{6}$

7 Alex is y years old.

Her friend Brett is 3 years older.

The total of their ages is 25

How old are Alex and Brett?

Alex is $\boxed{11}$ Brett is $\boxed{14}$

8

£1.52   £1.20

a) Work out the cost of one banana and one orange.

One banana costs $\boxed{32p}$ One orange costs $\boxed{28p}$

b) Compare methods with a partner.