# Solve equations, including with brackets
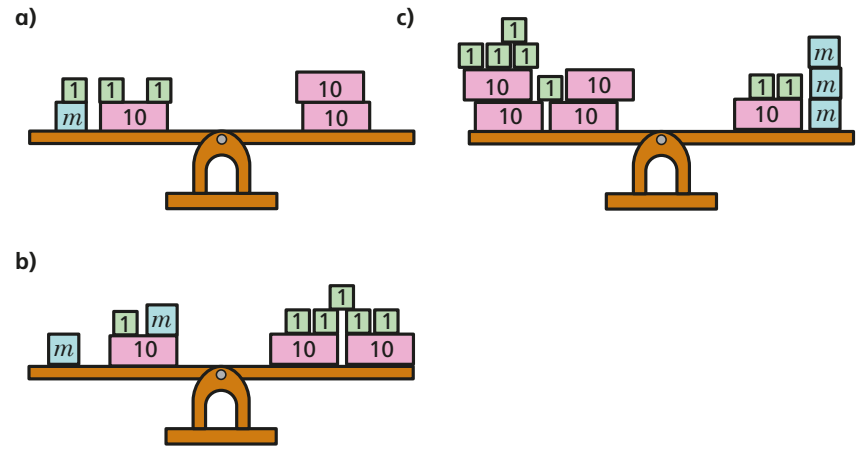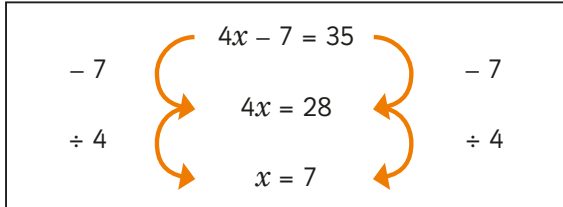
**1** Solve the equations.

a)  $p + 8 = 17$  
c)  $v - 7 = -2$  
e)  $\dfrac{t}{7} = 3$

b)  $y - 3 = 6$  
d)  $4h = 17$  
f)  $-35 = 5r$

**2** Work out the unknown value for each set of scales.

a)

c)

b)

**3** Huan has attempted to solve this equation.

$$4x - 7 = 35$$
$$-7 \qquad\qquad -7$$
$$4x = 28$$
$$\div 4 \qquad\qquad \div 4$$
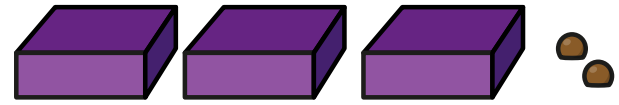$$x = 7$$

Find and correct his error.

**4** Solve the equations.

a)  $3w + 6 = 3$  
d)  $-4k - 2 = 10$

b)  $\dfrac{m}{2} - 8 = -3$  
e)  $\dfrac{1}{3}b - 3 = 3$

c)  $-3 = -v + 7$  
f)  $20 - 5n = -35$

**5** Aisha has 50 chocolates.

She fills 3 boxes and has 2 left over.



How many chocolates are there in each box?

**6** Jack and Whitney are solving the equation $4(x - 7) = 32$

> I am going to expand the brackets first.

> I am going to divide both sides by 4 first.

a)  Show that both methods give the same answer.

b)  Solve the equations.

   $3(x + 5) = 27$ $\qquad\qquad$ $4(2x - 3) = 10$

**4** Solve the equations.

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**d)** $-4k - 2 = 10$

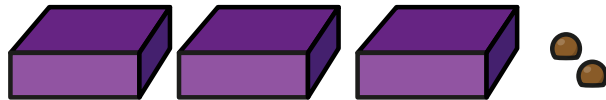**b)** $\dfrac{m}{2} - 8 = -3$

**e)** $\dfrac{1}{3}b - 3 = 3$

**c)** $-3 = -v + 7$

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**b)** Solve the equations.

$3(x + 5) = 27$         $4(2x - 3) = 10$

**7** Rearrange the cards into the correct order to solve the equation
$-2(3 - 4x) = 16$

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$8x = 22$

$x = 2.75$

$-6 + 8x = 16$

$x = 22 \div 8$

Can you solve the equation in a different way? Discuss with a partner.

**8** Solve the equations.

**a)** $3(f - 2) = 3$

**c)** $-8 = -2(t - 4)$

**b)** $5(4 - 2g) = 40$

**d)** $3(c + 2) - 5 = 9$