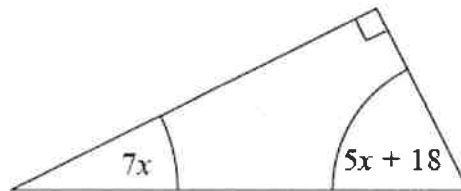


1.	Solve $2m = 6$ $\div 2 \downarrow m = 3 \downarrow \div 2$	2.	Solve $m - 4 = -7$ $+4 \downarrow m = -3 \downarrow +4$
3.	Solve $3a + 2 = 14$ $-2 \downarrow 3a = 12 \downarrow -2$ $\div 3 \downarrow a = 4 \downarrow \div 3$	4.	Solve $\frac{x+6}{2} = 5$ $\times 2 \downarrow x+6 = 10 \downarrow -6$ $\downarrow x = 4 \downarrow -6$
5.	Solve $3x + 2 = x + 8$ $-x \downarrow 2x + 2 = 8 \downarrow -x$ $-2 \downarrow 2x = 6 \downarrow -2$ $\div 2 \downarrow x = 3 \downarrow \div 2$	6.	Solve $2(t + 1) = 14$ <i>expand</i> $-2 \downarrow 2t + 2 = 14 \downarrow -2$ $\div 2 \downarrow 2t = 12 \downarrow \div 2$ $\downarrow t = 6 \downarrow \div 2$
7.	$P = 4x + 3y$ $x = 5$ $y = -2$ (a) Work out the value of P . $P = 4 \times 5 + 3 \times -2$ $P = 20 + -6$ $P = 14$	8.	Solve $\frac{x}{5} = 2\frac{1}{2}$ $\times 5 \downarrow x = 2.5 \times 5$ $x = 12.5 = 12\frac{1}{2}$

9. The diagram shows a right-angled triangle.



Angles in a triangle sum to 180°

All the angles are in degrees.

Work out the size of the smallest angle of the triangle.

$$7x + 5x + 18 + 90 = 180$$

$$\downarrow -108 \quad 12x + 108 = 180 \quad \downarrow -108$$

$$\downarrow \div 12 \quad 12x = 72 \quad \downarrow \div 12$$

$$x = 6$$

$$7x = 7 \times 6 = 42$$

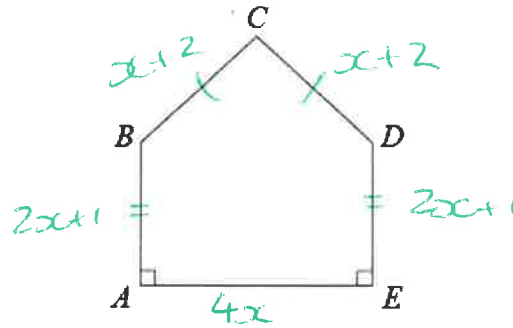
$$5x + 18 = 5 \times 6 + 18 = 48$$

three angles are:
 42° , 48° and 90°

smallest is 42°

10

The diagram shows a pentagon.
The pentagon has one line of symmetry.



$$\begin{aligned} AE &= 4x \\ AB &= 2x + 1 \\ BC &= x + 2 \end{aligned}$$

All these measurements are given in centimetres.

The perimeter of the pentagon is 18 cm.

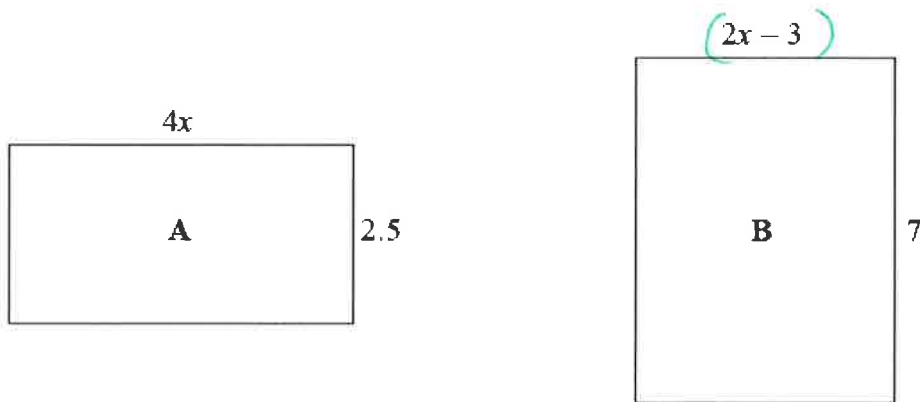
(a) Show that $10x + 6 = 18$

$$\begin{aligned} (x+2) + (x+2) + (2x+1) + (2x+1) + 4x \\ = 10x + 6 = 18 \end{aligned}$$

(b) Find the value of x .

$$\begin{aligned} 10x + 6 &= 18 \\ -6 & \\ \hline 10x &= 12 \\ \div 10 & \\ x &= 1.2 \end{aligned}$$

11 Here are two rectangles.



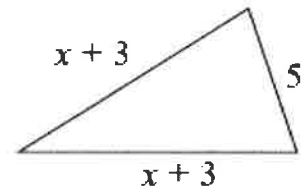
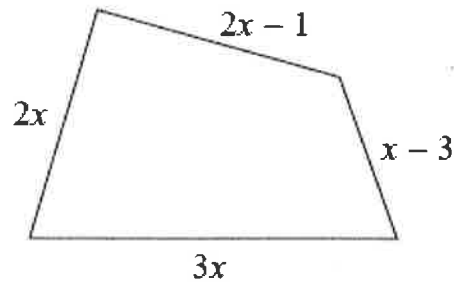
All measurements are in centimetres.

The area of rectangle A is equal to the area of rectangle B.

Work out the perimeter of rectangle B.

$$\begin{aligned} A &= bh & A &= bh \\ A &= 4x \times 2.5 & A &= (2x-3) \times 7 \\ A &= 10x & A &= 14x - 21 \\ 10x &= 14x - 21 \end{aligned}$$

$$\begin{aligned} 10x &= 14x - 21 \\ -10x & \\ \hline 21 &= 4x \\ \div 4 & \\ 5.25 &= x \\ P &= 2 \times [2 \times 5.25 + 3 + 7] \\ P &= 2 \times [14.5] \\ P &= 29 \text{ cm} \end{aligned}$$



In the diagram all measurements are in centimetres.

The perimeter of the quadrilateral is twice the perimeter of the triangle.

Work out the perimeter of the quadrilateral.

$$2x + 2x - 1 + x - 3 + 3x = 2 \times (x + 3 + 5 + x + 3)$$

$$8x - 4 = 2 \times (2x + 11)$$

$$8x - 4 = 4x + 22 \quad \downarrow -4x$$

$$4x - 4 = 22 \quad \downarrow +4$$

$$4x = 26 \quad \downarrow \div 4$$

$$\underline{x = 6.5}$$

$$\begin{aligned} &8x - 4 \\ &= 8 \times 6.5 - 4 = \underline{\underline{48 \text{ cm}}} \end{aligned}$$