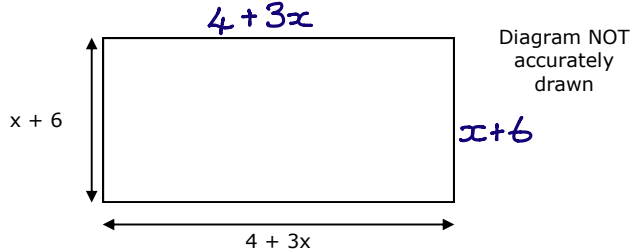


# Area with algebra

How to ... *This is not as tough as it first appears...*

The diagram shows a garden in the shape of a rectangle



All measurements are in metres. The perimeter of the garden is 32 metres.

Work out the value of  $x$

*all the way around the shape*

$$4 + 3x + x + 6 + 4 + 3x + x + 6 = 32$$

$$8x + 20 = 32 \quad \leftarrow \text{we now need to solve this.}$$

$$(-20) \quad 8x + 20^{-20} = 32^{-20}$$

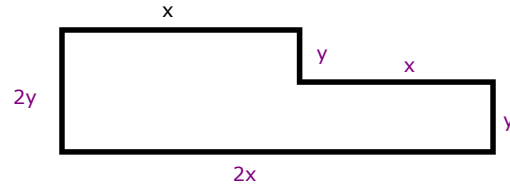
$$8x = 12$$

$$(\div 8) \quad \frac{8x}{8} = \frac{12}{8} \quad \text{so } x = 12 \div 8 = \underline{\underline{1.5}} \quad (4)$$

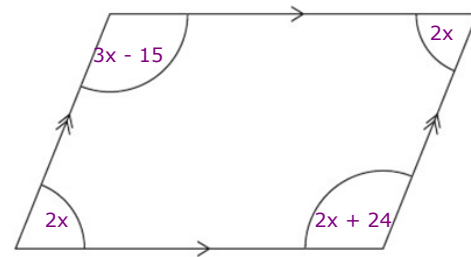
*you could also cancel this down  $\frac{6}{4} = \frac{3}{2} = 1.5$*

Now have a go yourself ...

Q1. The diagram shows the plan of an L shaped room. The dimensions of the room are given in metres. Write down a formula in terms of  $x$  and  $y$  for the perimeter  $P$  metres of the room.



Q2. The diagram shows a parallelogram.



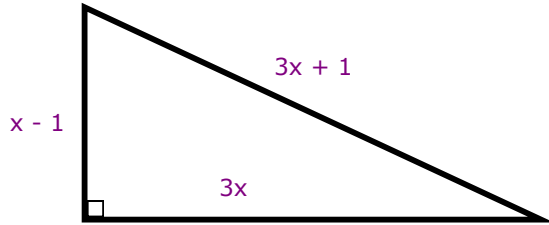
The size of the angles, in degrees are: -

- 2x
- 3x - 15
- 2x
- 2x + 24

Work out the value of  $x$

## Exam Questions

**Q1.** The diagram shows a triangle.



In the diagram, all the measurements are in metres.

The perimeter of the triangle is 56 m.

The area of the triangle is  $A \text{ m}^2$ .

Work out the value of  $A$

## Ready to be marked ?

### Checklist



Answer checked



Working out shown

### Keywords



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### Things to remember ...



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### What went well ...



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### Teacher comment ..