

Maths- Skills

Learning objective; To understand area and perimeter on a grid.

Warm up: Define area and perimeter

Can you decide which sentence relates to each word, write the correct sentences as a whole in your book.

Area is.....

the size around the outside of a shape.

Perimeter is

the size of the space inside of a shape.

Warm up: Define area and perimeter

Can you decide which sentence relates to each word, write the correct sentences as a whole in your book.

Area is the size of the space inside of a shape.

Perimeter is the size around the outside of a shape.

Area

Area is the size of a surface on a 2D shape.

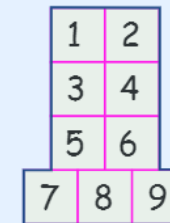
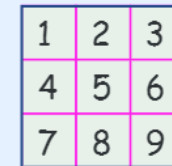
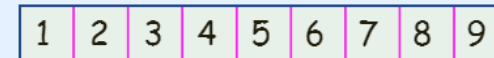
On the left are 3 shapes, they have the same area.
How do we know ?

The shape covers 9 squares.

Today we are going to look at how to measure area using a grid
(squared paper)

Example:

These shapes all have the same area of 9:



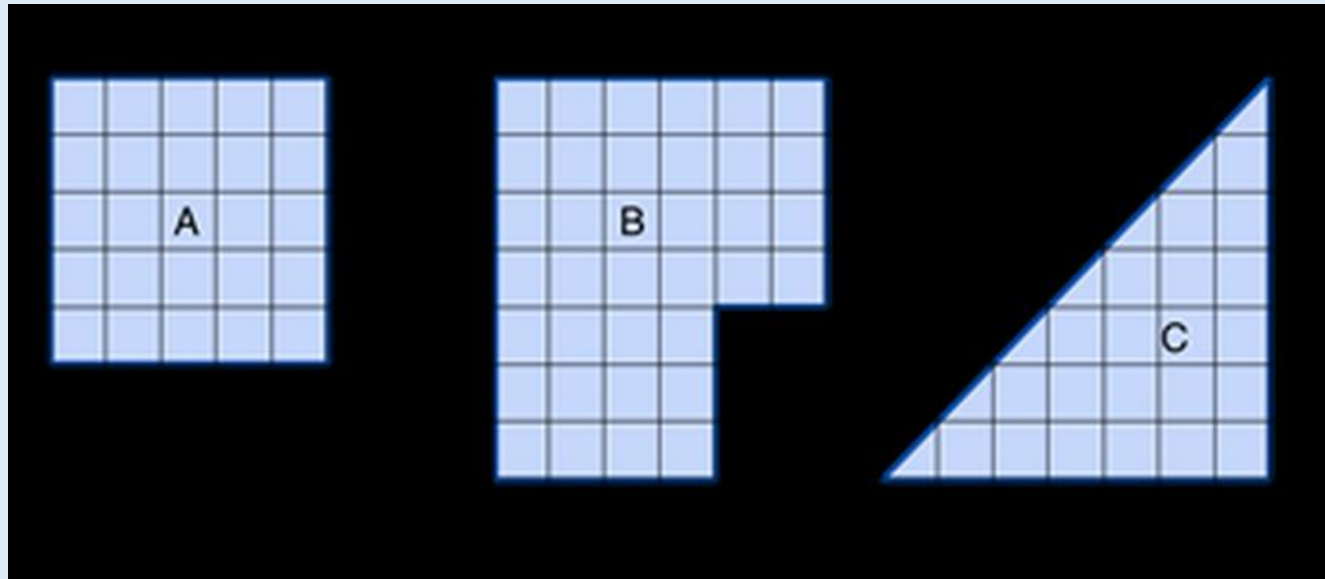
Area

Finding the area of a shape using a grid, is all about counting the squares inside a shape.

Area is always measure in² meaning whatever unit 'squared'.

We will look at why that is in the future....

What is the area for each of these shapes?



C is more tricky, you will need to count how many half squares there are..... then work out how many whole squares that will make.

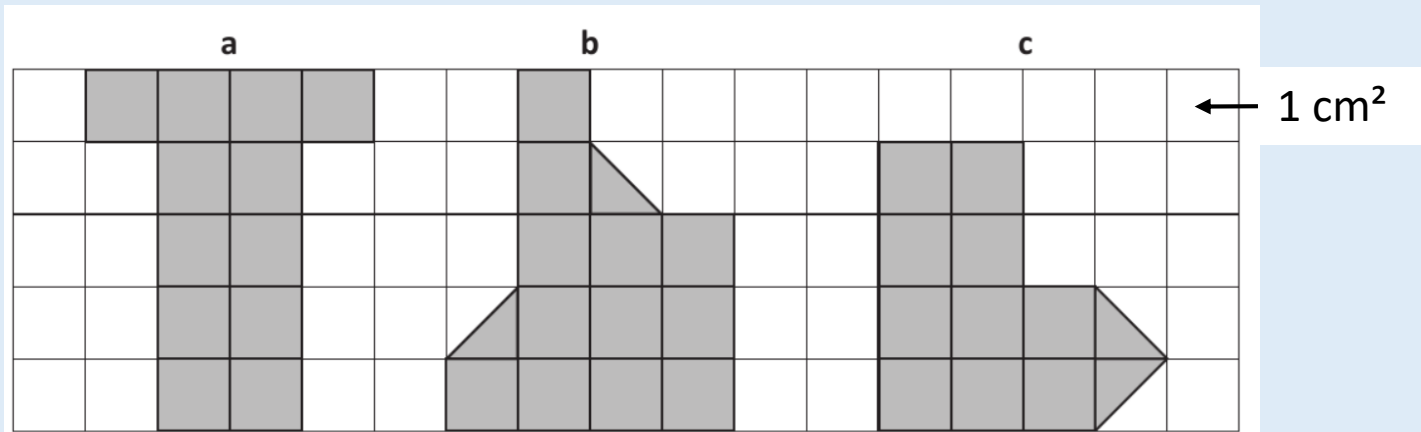
Answers on the next slide

Previous answers; $A=25^2$ $B=36^2$ $C=24.5^2$

Area When counting squares, it is important to know the size of each square.

The first set of shapes are just 1cm^2 , simply count the squares and multiply it by 1.

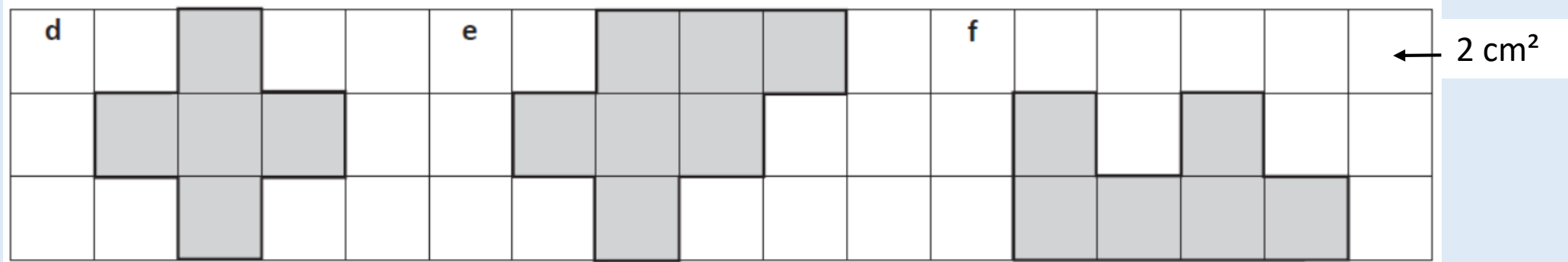
The second set are 2cm^2 each, so after counting you will need to multiply by 2.



Area = _____ cm²

Area = _____ cm²

Area = _____ cm²

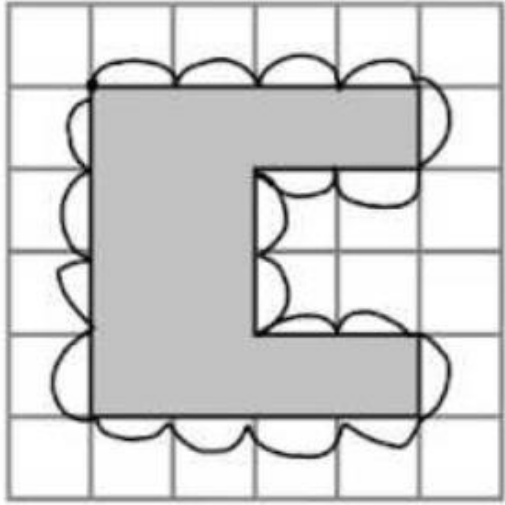


Previous answer: A= 12 cm² B= 13 cm² C= 11 cm² D= 5 cm² E= 7 cm² F= 12 cm²

Perimeter

Is the size around the outside of a shape, when using a grid you simply need to count how many squares are around the shape.

Find the perimeter of the object shown on the grid below.



$P = 20 \text{ units}$

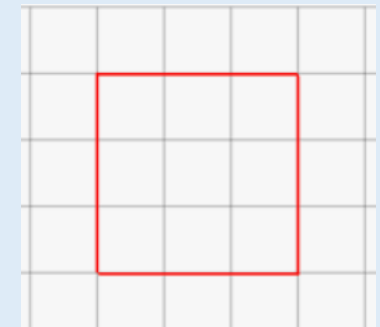
As we can see, there are 20 squares around the outside of this shape, so the perimeter is 20.

We can't say if it is cm, m or inches or even goats, because it has not been recorded.

I can simply say it is 20.

Look carefully at images in case it states the unit of measurement and put your answer in the same unit.

What is the perimeter of this shape?

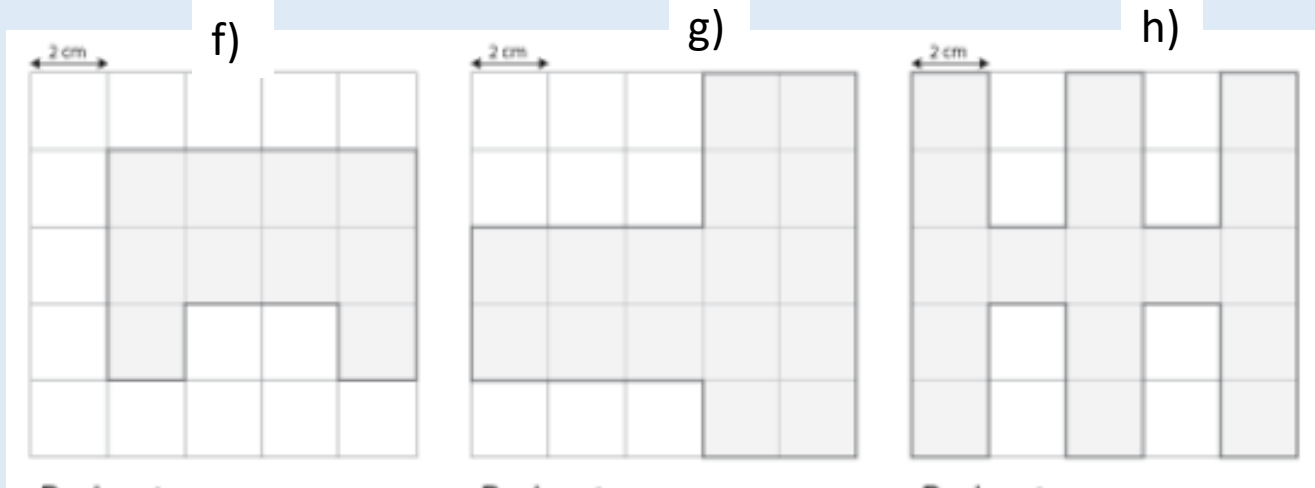
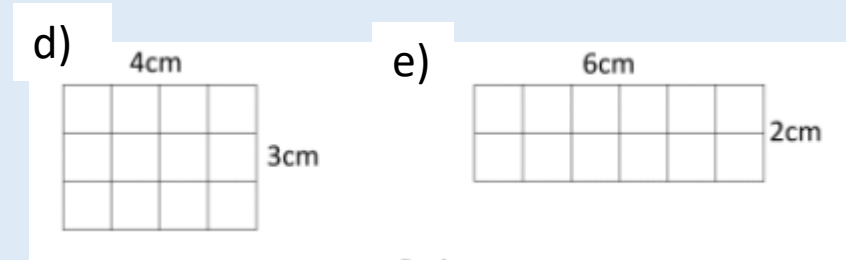
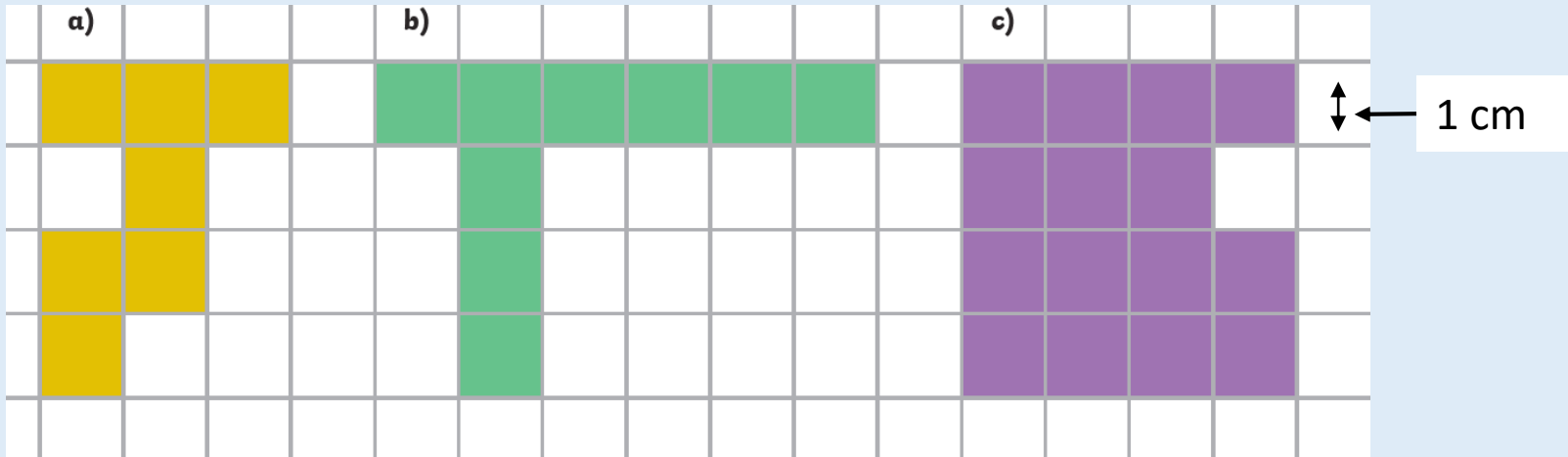


Previous answer: 12

Perimeter

Can you find the perimeter of these shapes?

Take care to look at the measurement for each shape.



Previous answer: A= 16 cm B= 20 cm C= 18 cm D= 14 cm E= 16 cm F= 32 cm G= 40 cm H= 74 cm

Plenary

Mr Lawson wants to add 2 flower beds to his garden.

He has designed them on squared paper.

He also needs to put a fence around each flower bed to stop Otto (his dog) from ruining them.

Flowers cost £12 per square metre

Fencing costs £7 per metre

How much will this cost Mr Lawson?

Each square on the grid represents 1m.



_____ m



_____ m