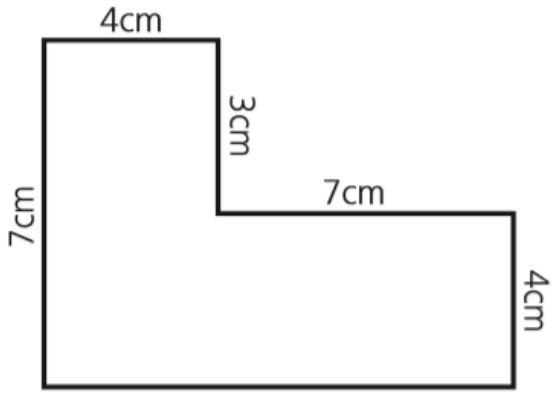
Problem of the Week: Week 4 (Summer 2): Year 8: Geometry: Formulae for perimeters and areas

- Calculate and solve problems involving perimeters of 2-d shapes, including circles, areas of circles and composite shapes
- Derive and apply formulae to calculate and solve problems involving perimeter and area of triangles, parallelograms, trapezia and the volume of cuboids (including cubes)

Find the area

The shape below is not drawn to scale.



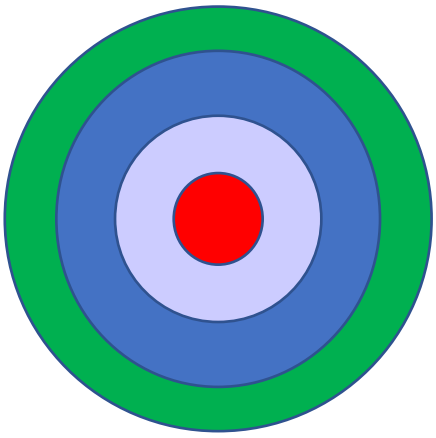
Find the area of this shape, and another way and another, and another…..
(below there is a sheet with several copies of the diagram to use)

https://www.ncetm.org.uk/resources/47230 (secondary assessment materials)

Areas:
Draw a parallelogram with an area of 12cm^2. Draw a different parallelogram with an area of 12cm^2. How can you find out the dimensions of any parallelogram with an area of 12cm^2?

Draw a triangle with an area of 6cm^2. Draw a different triangle with an area of 6cm^2. How can you find out the dimensions of any triangle with an area of 6cm^2?

Circles:



This is made up of a series of circles placed on top of each other.
The diameter of each circle is as follows:
Red = 3cm
Purple = 5cm
Blue = 7cm
Green = 8cm

What fraction of the green circle is the red circle?
What fraction of the green circle are the blue and purple rings?

Adapted from: bull's eye https://nrich.maths.org/780

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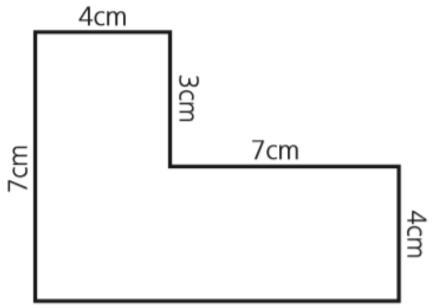

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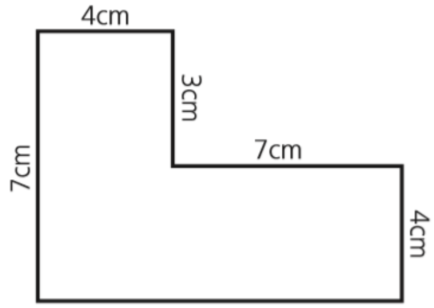

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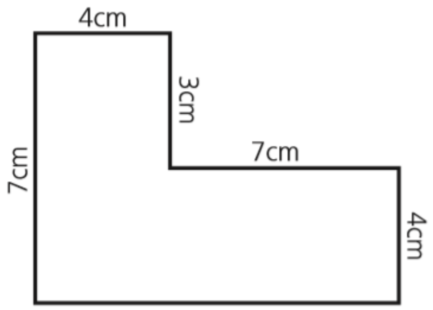

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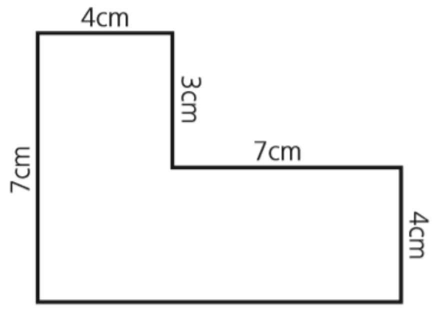

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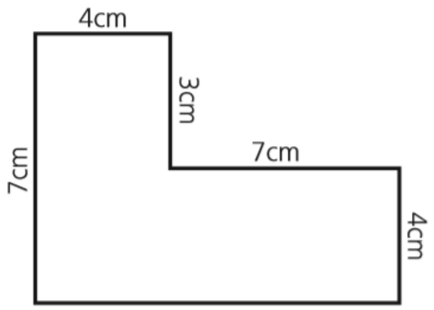

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