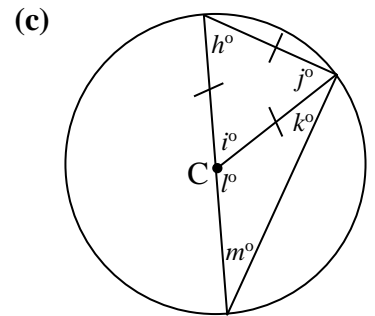
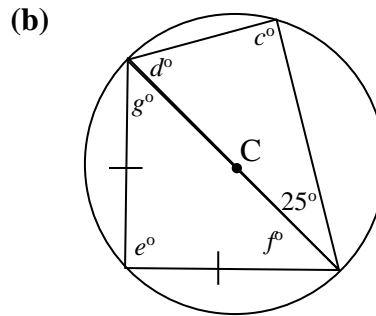
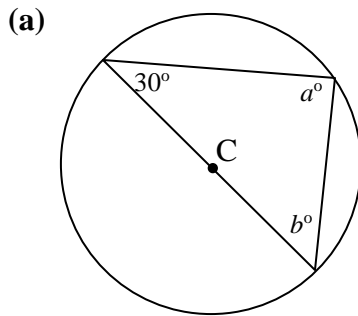


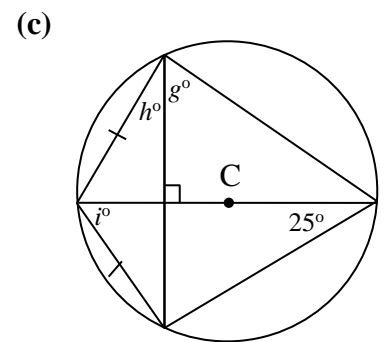
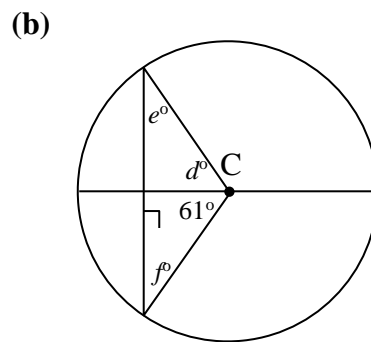
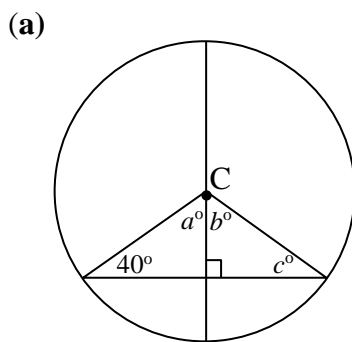
## Homework Due Tuesday 8<sup>th</sup> October

### Properties of Shape & Similarity

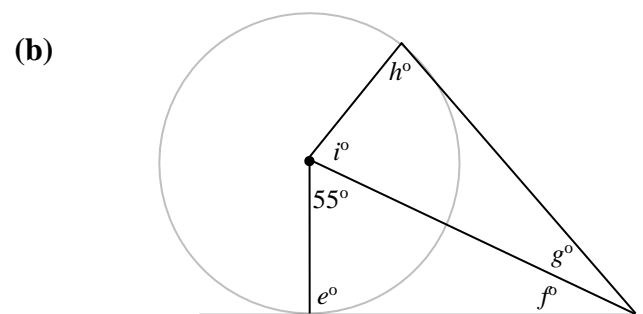
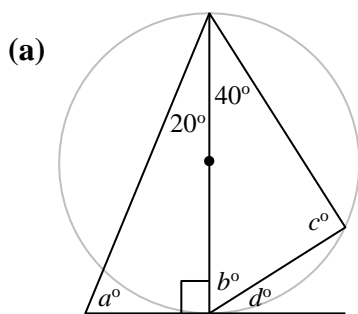
1. Find the missing angles in each of these diagrams. Each circle has centre C.



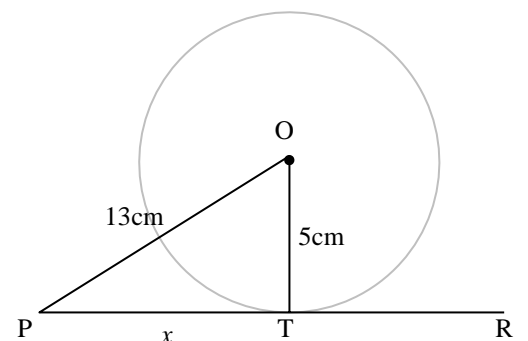
2. Use symmetry in the circle to find the missing angles in the circles (centre C) below.



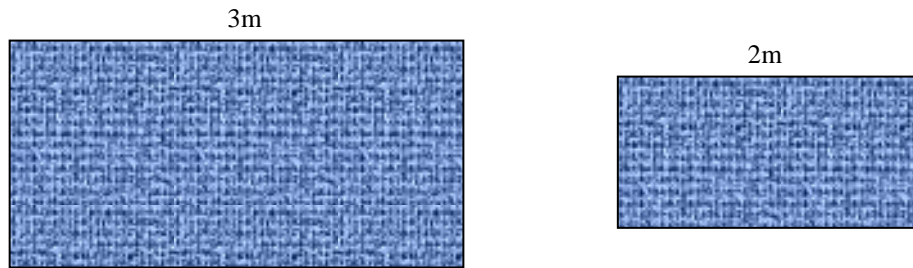
3. Calculate the sizes of the missing angles in each diagram.



4. PR is a tangent to the circle, centre O, at T.  
Calculate the length of the line marked  $x$ .



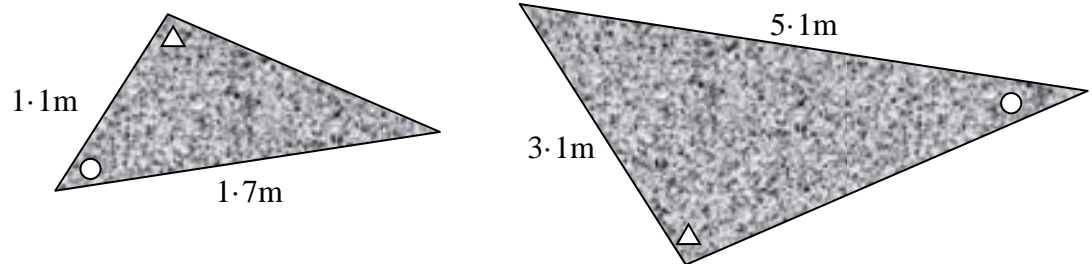
5. These two rugs are mathematically similar.



The area of the larger one is  $4.5\text{m}^2$ . What is the area of the smaller one?

6. I have two triangular plots in my garden which I have had turfed.

The diagrams below show plans of both areas. Equal angles are marked with the same shape.



The cost depends on the area being tiled.

It cost £16.75 to buy turf for the smaller area. How much did it cost for the larger one if the triangles are mathematically similar?

7. These two parcels are mathematically similar.

The smaller one has dimensions which are half those of the larger.

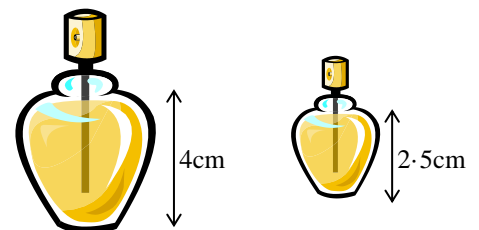


If the smaller one has volume  $150\text{cm}^3$ , calculate the volume of the larger.

8. These two perfume bottles are mathematically similar.

The cost depends on the volume of perfume in them.

The larger bottle costs £62.



Find the cost of the smaller bottle correct to the nearest penny.