Circles 1 – "A triangle which is drawn with one vertex at the centre of a circle and the other two vertices on the circumference is isosceles, because two if its sides are radii"

Applet: http://www.waldomaths.com/Circle6NLW.jsp
Video: http://www.waldomaths.com/video/CircIsos01/CircIsos01.jsp

Questions (NB. None of these diagrams are to scale, so measuring angles won't help!)

1 In diagram A, ΔOAB has been shaded. It is an isosceles triangle. See how many more isosceles triangles you can find.

2 In diagram B calculate all the angles marked a – f.

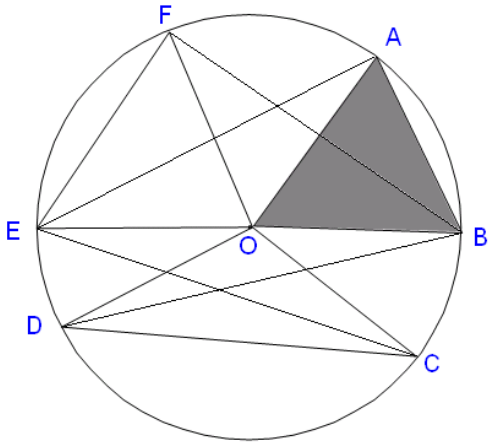

Diagram A

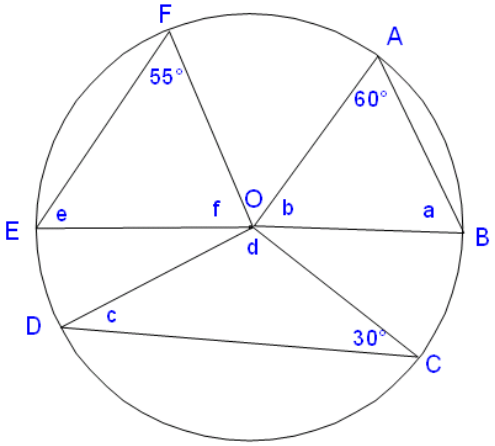

Diagram B

3 In diagram C, calculate the sizes of the angles marked g, h, j.

4* In diagram D, calculate angle k. [You will need to calculate other angles first]

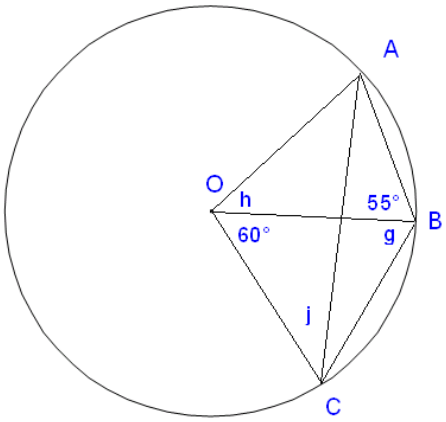

Diagram C

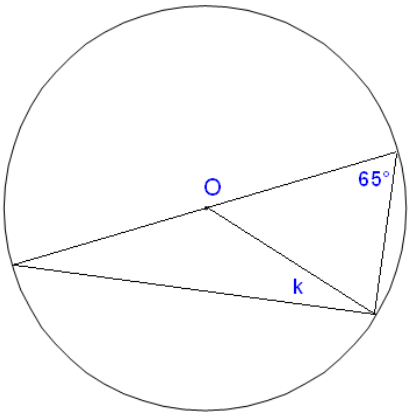

Diagram D

Answers: **1** 7 (ΔOAB, ΔOFB, ΔOAE, ΔOEF, ΔOCD, ΔOBD, ΔOCE)

2 a = 60°, b = 60°, c = 30°, d = 120°, e = 55°, f = 70°

3 g = 60°, h = 70°, j = 25° **4*** k = 25°