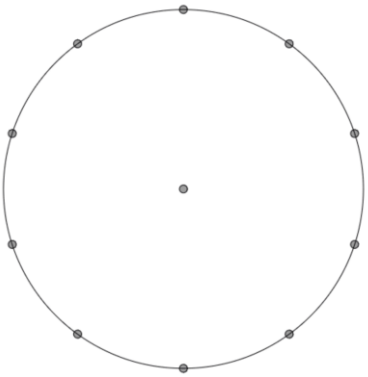
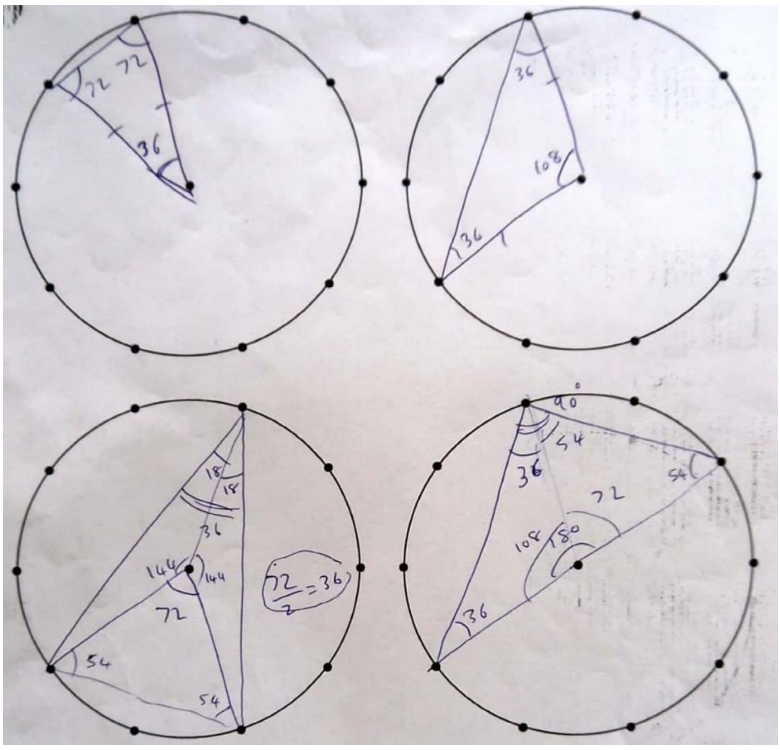
Practical Maths

Introducing Circle Theorems

This is a favourite way to introduce the circle theorems and their proofs. Give students circles with 10 dots on the circumference (can be drawn on GeoGebra)



Ask the students to draw triangles on the circles, using the dots as the vertices of the triangles. Then ask the students to calculate the angles at the vertices of each triangle. Adding in radii can help the calculations. Students can extend their drawings to more interesting shapes, for example the classic arrowhead.



Based on the students' drawings and calculations ask what they notice. Exploring, for example, that the angles in the same segment are equal or comparing the angle at the centre with the angle at the circumference.

This activity naturally leads to helping students understand the proofs of the circle theorems as they have used similar techniques to find the angles in their drawings.