

Name: _____

GCSE (1 – 9)

Proof of Circle Theorems

Instructions

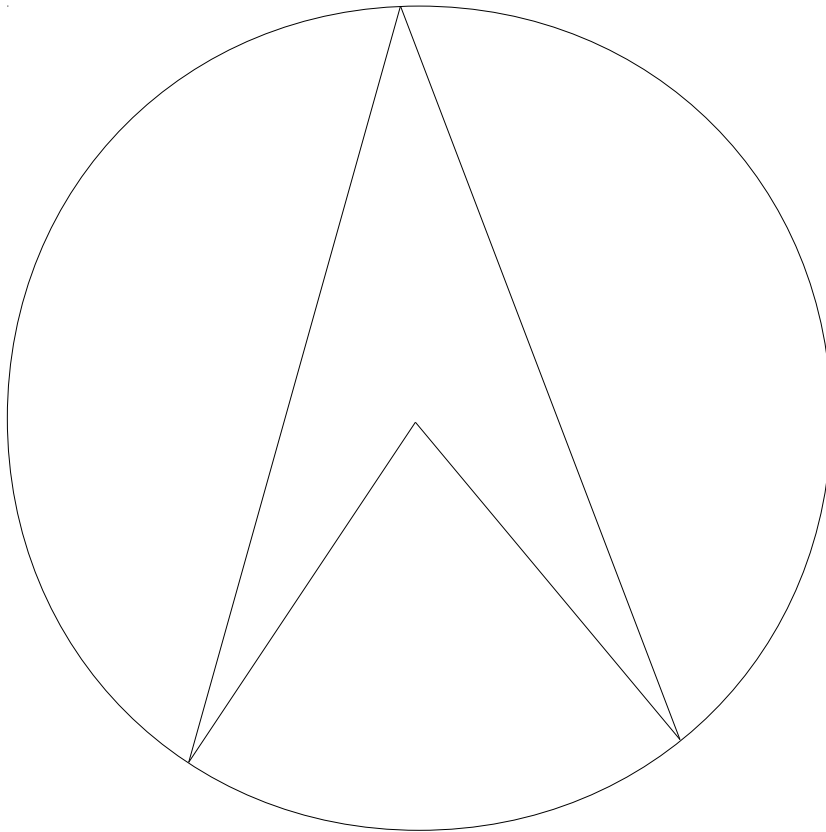
- Use **black** ink or ball-point pen.
- Answer all questions.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- You must **show all your working out.**

Information

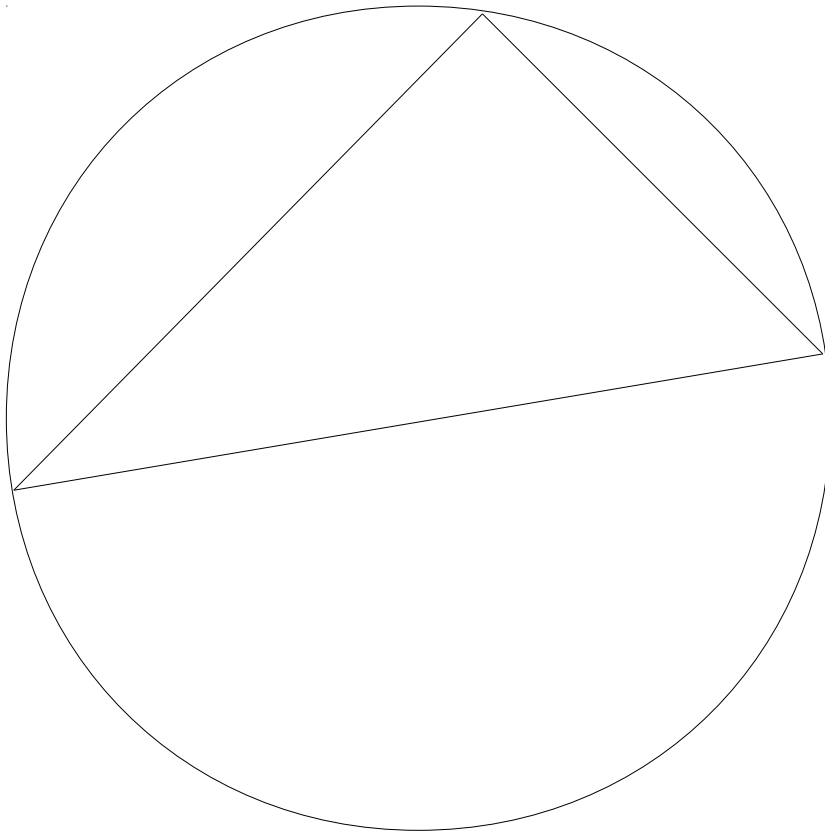
- The marks for each question are shown in brackets – *use this as a guide as to how much time to spend on each question.*

Advice

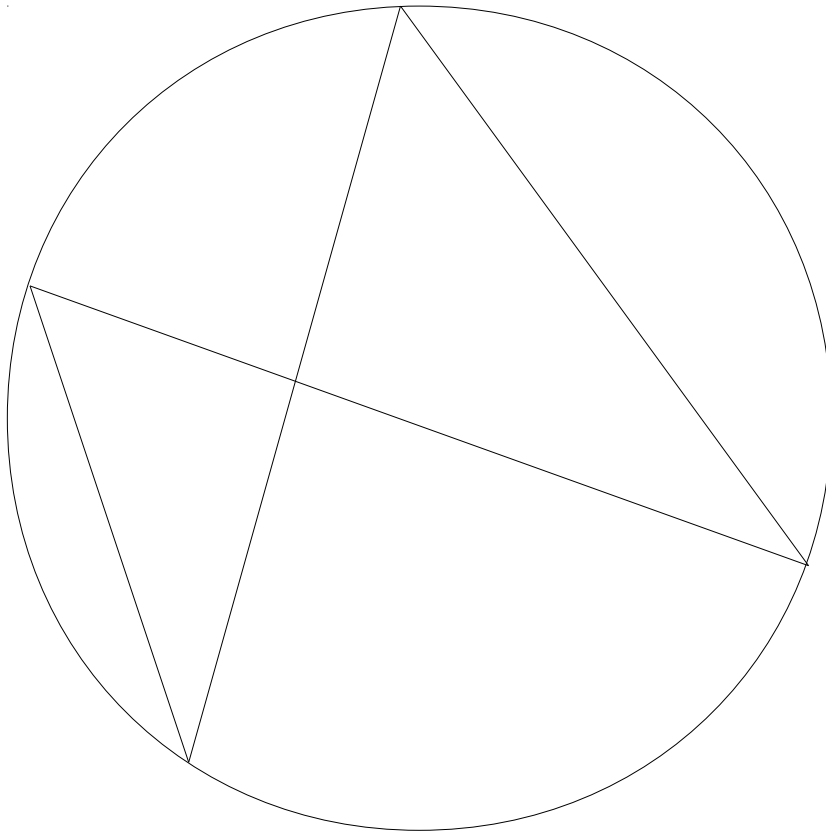
- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end



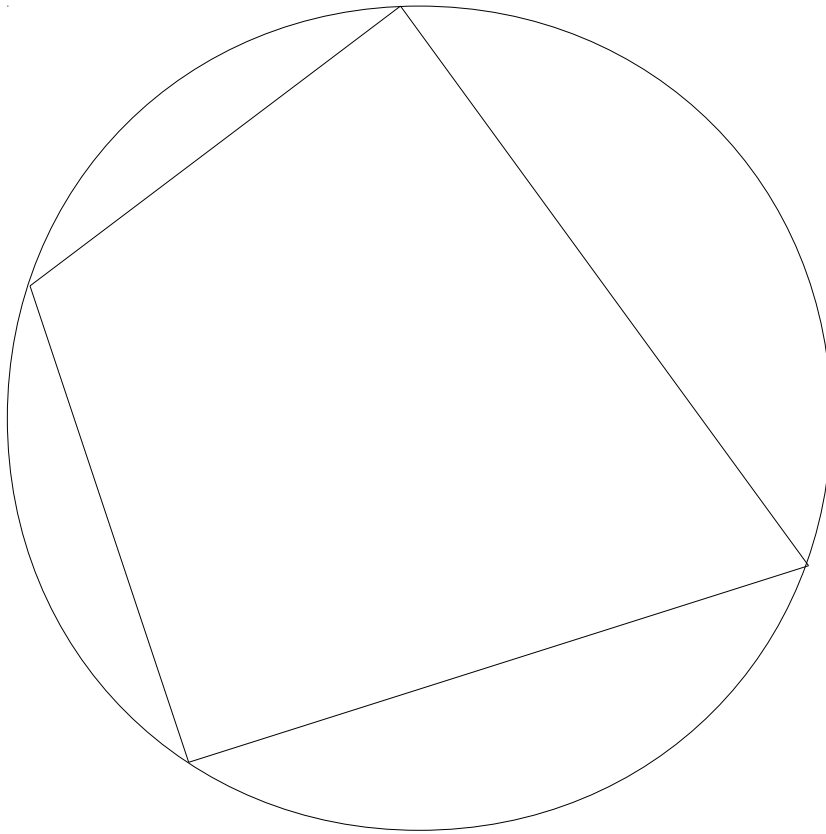
Prove that the angle subtended by an arc at the centre of a circle is twice the angle subtended at any point on the circumference



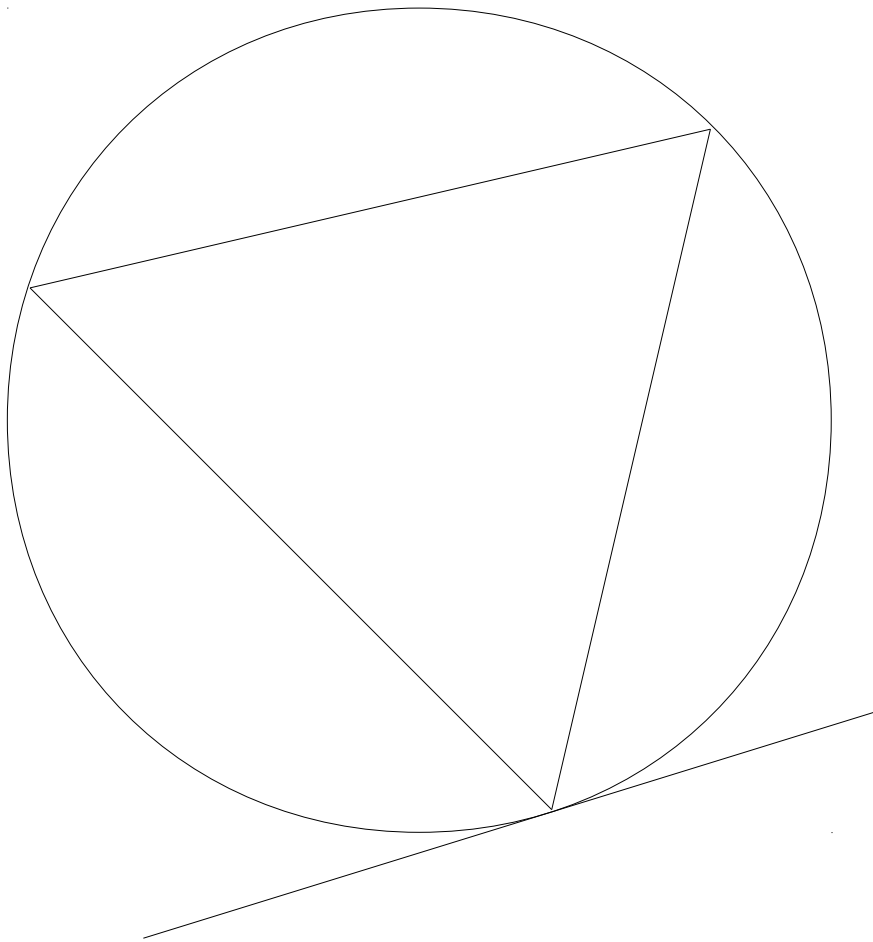
Prove the angle subtended at the circumference by a semicircle is a right angle



Prove that angles in the same segment are equal



Prove that opposite angles of a cyclic quadrilateral sum to 180°



Prove the alternate segment theorem