Name:..

Total Marks:..

GCSE (9-1) Grade 8/9
Proof of
Circle Theorems

naikermaths

Instructions

Use **black** ink or ball-point pen.
Fill in the boxes at the top of this page with your name.
Answer **all** questions.
Answer the questions in the spaces provided
  – there may be more space than you need.
Show all your working out

Information

The total mark for this paper is 24.
The marks for **each** question are shown in brackets.
  use this as a guide as to how much time to spend on each
  question.
Questions labelled with an **asterisk** (*) are ones where the quality of
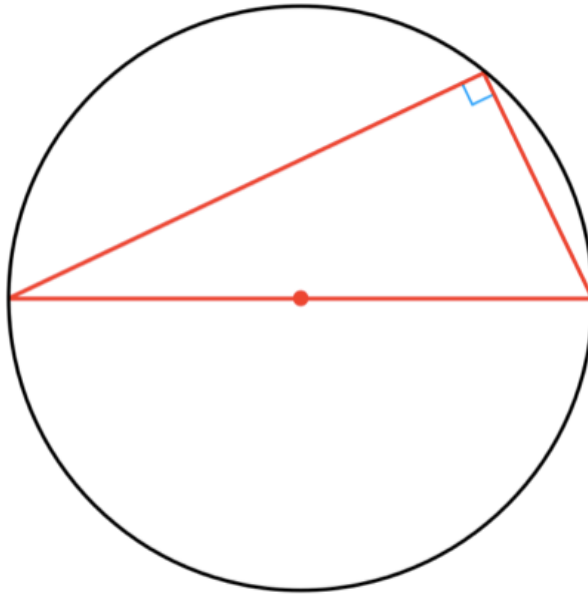your written communication will be assessed

Advice

Read each question carefully before you start to answer it
Attempt every question
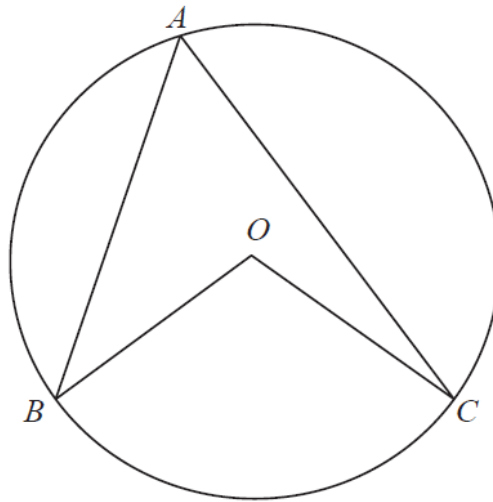Check your answers if you have time at the end

1.

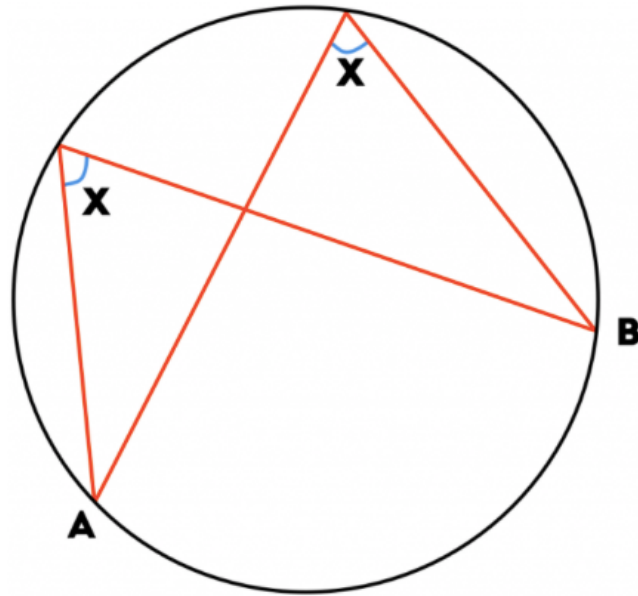Prove that the angle in a semi-circle is always 90°

(4 marks)

2. *A*, *B* and *C* are points on the circumference of a circle centre *O*.

Prove that angle *BOC* is twice the size of angle *BAC*.

(4 marks)

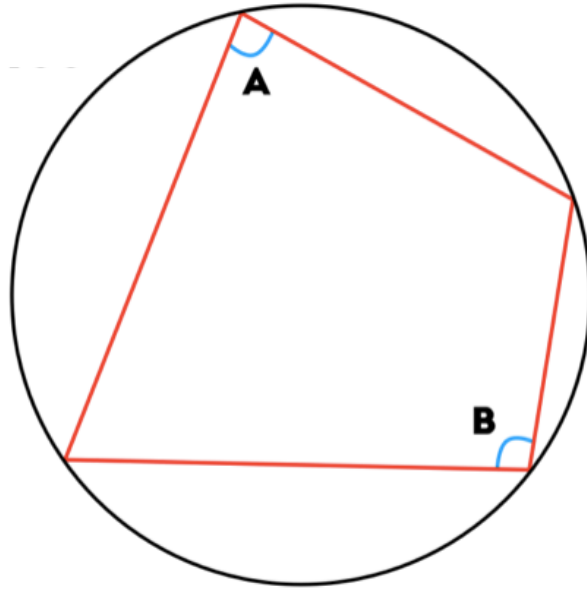**3.**

Prove that angles in the same segment are equal
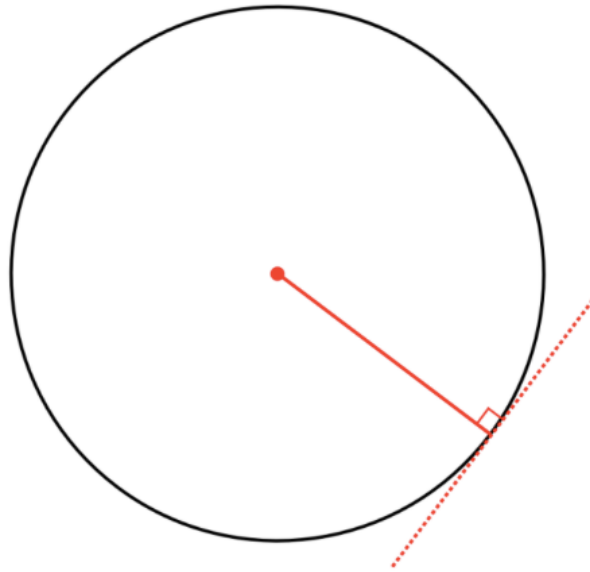
(4 marks)

4.

Prove that the opposite angles in a cyclic quadrilateral add up to 180^0
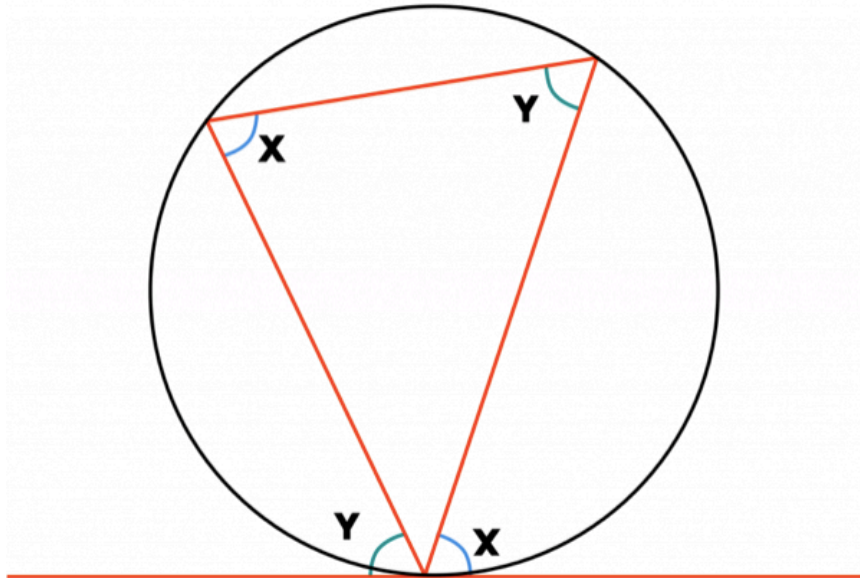
(4 marks)

5.

Prove that the angle between a tangent and the radius is 90^0

6.

Prove the alternate segment theorem ; that the angle between the tangent and the chord is equal to the angle in the opposite segment

<div align="right">(4 marks)</div>

TOTAL FOR PAPER: 24 MARKS