

Name: _____

ASM Tuition Academy
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 you're working out**.

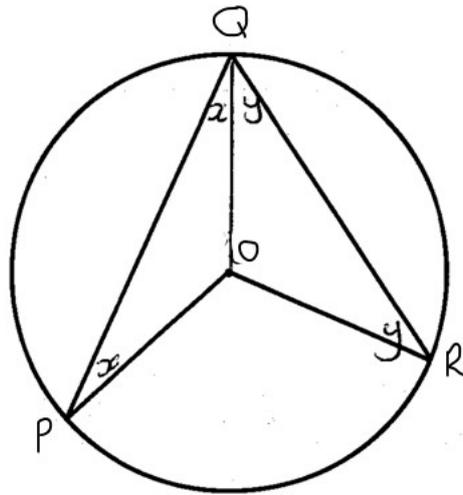
Information:

- 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 time.
- Try to answer every question.
- Check your answers if you have time at the end.

Q1-



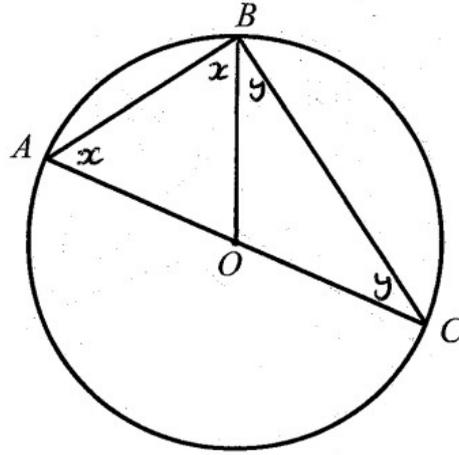
P , Q and R are points on the circumference of a circle, centre O .

Prove that angle POQ is twice the size of angle PQR .

You must not use any circle theorems in your proof.

(Total for Question 1 is 4 marks)

Q2-

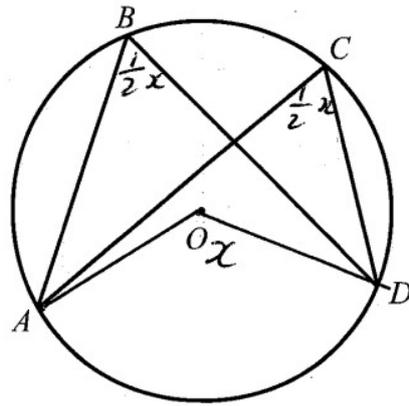


**P, Q and R are points on the circumference of a circle, centre O.
POR is a diameter of the circle.**

Prove that angle PQR is 90° .

You must not use any circle theorems in your proof.

(Total for Question 2 is 4 marks)

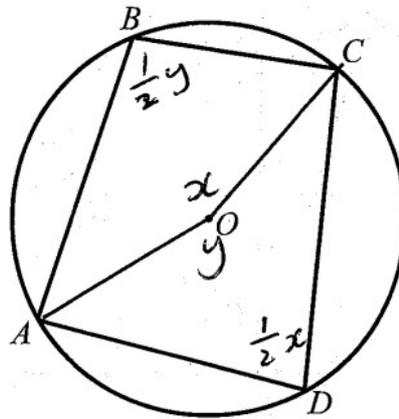


P, Q, R and S are points on the circumference of a circle, centre O.

Prove that angle PQS and angle PRS are equal.

(Total for Question 3 is 2 marks)

Q4-

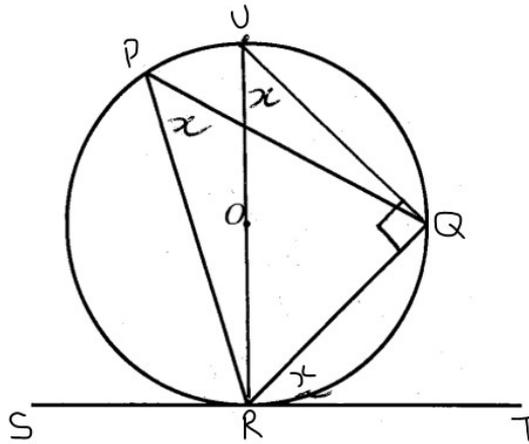


P, Q, R and S are points on the circumference of a circle, centre O .

Prove that angle PQR and angle PRS add to 180° .

(Total for Question 4 is 4 marks)

Q5-



**P, Q and R are points on the circumference of a circle, centre O.
SRT is a tangent to the circle.**

Prove that angle QRT and angle QPR are equal.

(Total for Question 5 is 4 marks)
