

**GRADE 11**

**SUBJECT: MATHEMATICS**

**WEEK 11 LESSON 1**

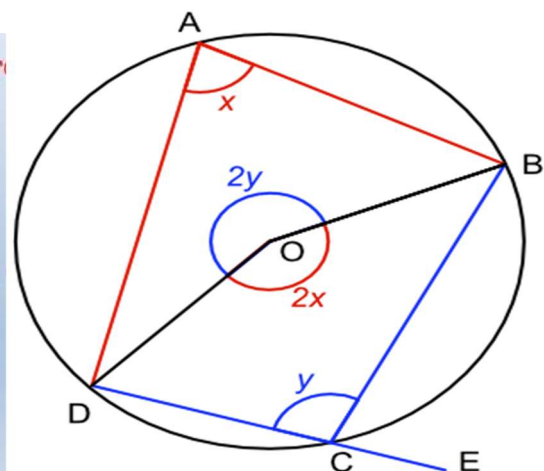
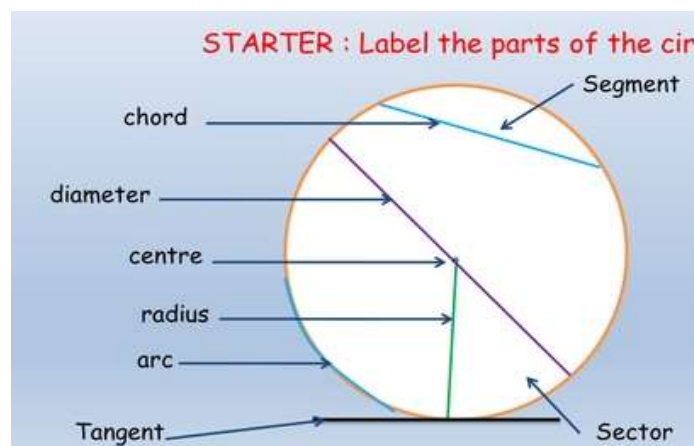
**TOPIC: GEOMETRY**

**OBJECTIVE:** Solve geometric problems using properties of circle and circle theorems.

**SUB-TOPIC: CIRCLE THEOREMS**

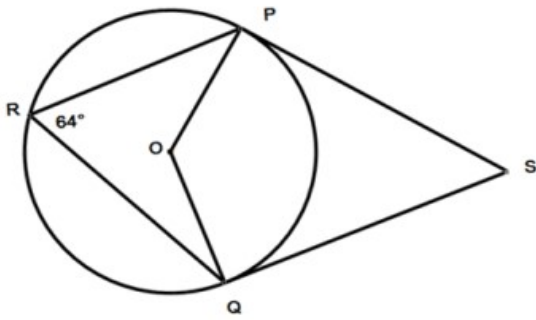
**Content:**

Angle at the centre is twice the angle at the circumference	Angle subtended at circumference by a semicircle is $90^\circ$	Tangents and radii meet at $90^\circ$	Tangents from a point have equal length
Look for the 'Arrow' Shape! Angles in the same segment are equal	Opposite angle to the diameter! Opposite angles in a cyclic quadrilateral sum to $180^\circ$	Alternate Segment Theorem	
Look for the 'Bow' Shape!	$A + C = 180^\circ$ $B + D = 180^\circ$	Tangent	

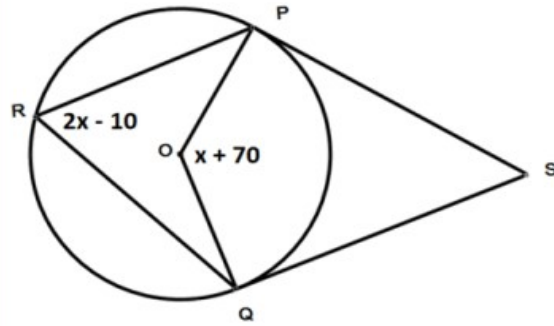


Use the diagrams to find the missing angles indicated.

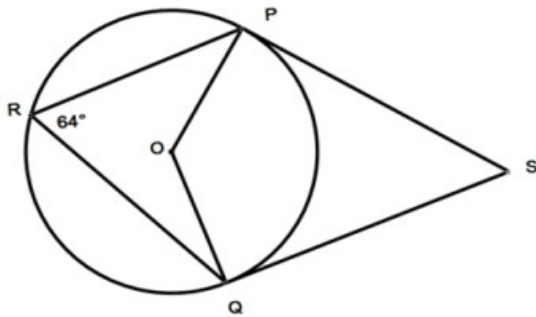
Find the angle POQ



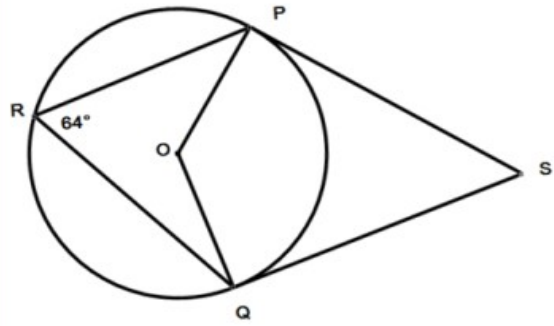
Find the value of x



Find the angle OQP

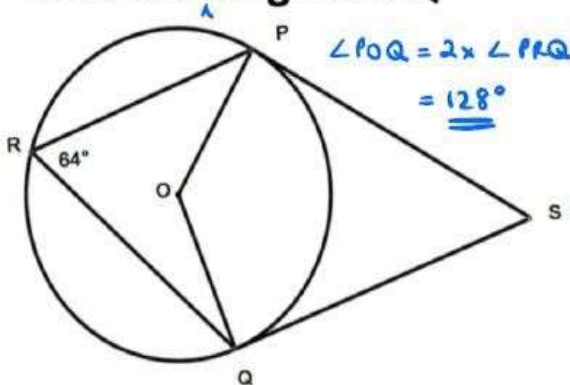


QS = 5cm  
Find the circumference of the circle



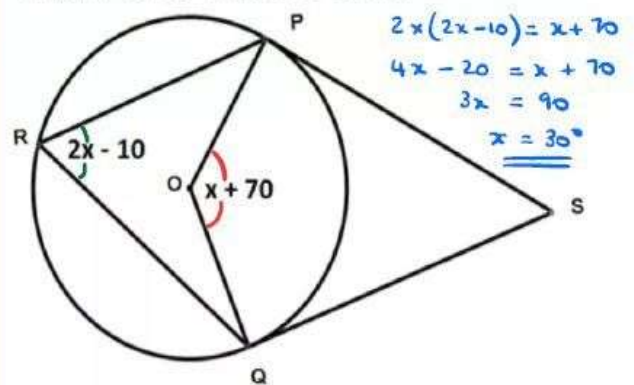
①

Find the obtuse angle POQ



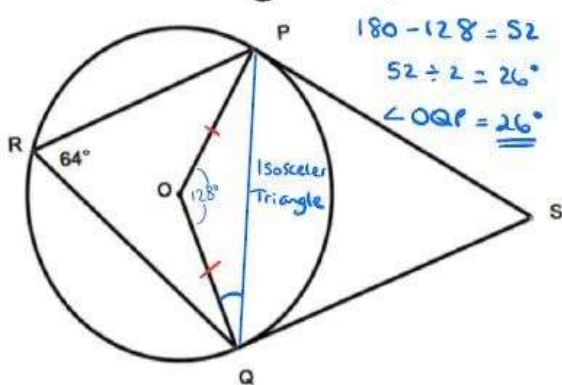
②

Find the value of x



③

Find the angle OQP



④ QS = 5cm

Find the circumference of the circle

