

Name: _____

Date: _____

Math Challengers 5.4 Central angle and Inscribed Angles

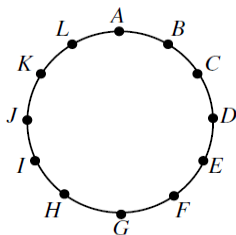
1. Find the value of the missing angles

<p>i) $\angle 1 =$ $\angle 2 =$</p>	<p>ii) $\angle 3 =$ $\angle 4 =$</p>	<p>iii) $\angle 5 =$ $\angle 6 =$ $\angle 7 =$</p>
<p>iv) $\angle 4 =$ $\angle 5 =$</p>	<p>v) $\angle 6 =$ $\angle 7 =$ $\angle 8 =$</p>	<p>vi) $\angle 7 =$ $\angle 8 =$ $\angle 9 =$</p>

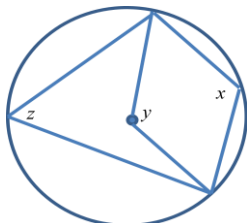
2. Find the value of each of the following angles:

<p>i) $\angle x =$ $\angle y =$ $\angle z =$</p>	<p>ii) $\angle x =$ $\angle y =$ $\angle z =$</p>	<p>iii) $\angle x =$ $\angle y =$ $\angle z =$</p>
---	--	---

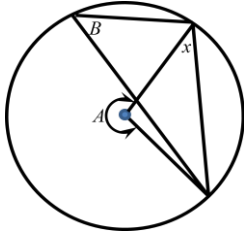
3. Given the following diagram, where all the points from A to L are equally spaced along the circumference, what is the degree angle of $\angle AEH$?



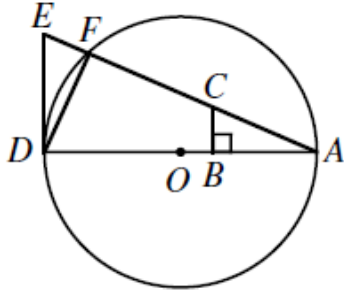
4. If the angle y is 58 degrees more than angle z, what is the value of angle "x"?



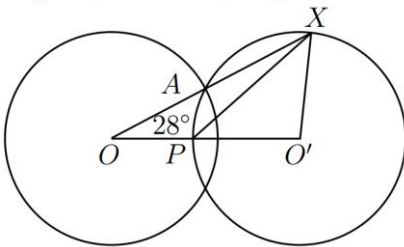
5. Given that angle A is 198 degrees more than angle B, what is the degree of angle "x"?



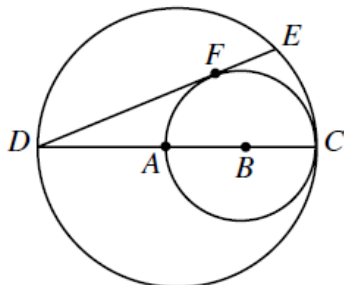
6. In the diagram shown, $\angle ABC = 90^\circ$, $CB \parallel ED$, $AB = DF$, $AD = 24$, $AE = 25$ and O is the center of the circle. Determine the perimeter of CBDF.



7. Two circles with the same radius have centres "O" and "O' ". The line segment connecting both centres meet the right circle at point "P". Point "A" is one intersection point between the two circles. OA meets the circle at the right at point "X". Given that angle AOP is 28 degrees, what is the angle XPO' ?



8. CD is the diameter of the larger circle centred at "A" and AC is the diameter of the smaller centred at "B". $DC=12$, DE is tangent to the smaller circle at point "F". Find the length of DE.



9. PA and PB are tangents to the circle at points "A" and "B" respectively. Point "Q" is on the line that joins OP. If angle APB is 34 degrees, what is angle AQB?

