

Inscribed Angles and Cyclical Polygons

1. On the circle provided, mark any two points. Name them A and B. Then draw a central angle to these points and measure the angle with a protractor. Record your values below:

Central Angle AZB: _____

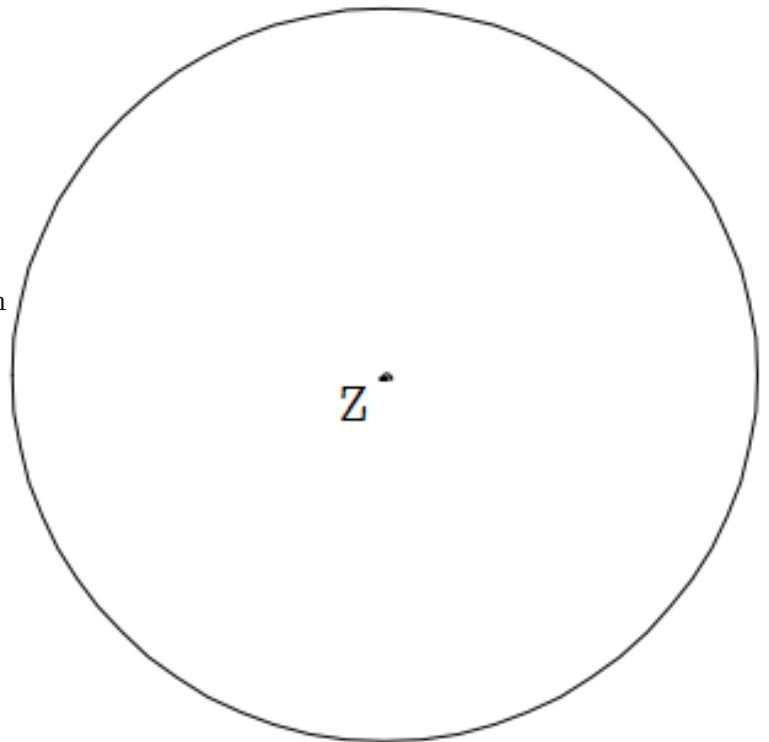
$m\widehat{AB}$: _____

2. Now mark a new point on the circle that is not between A and B. Call it R.
What are the two arcs you have made between A and B?
Minor arc: _____; measure: _____
Major arc: _____; measure: _____

3. Draw angle ARB. Measure it with a protractor. This is called an *inscribed angle* because its vertex is located on the circle itself.

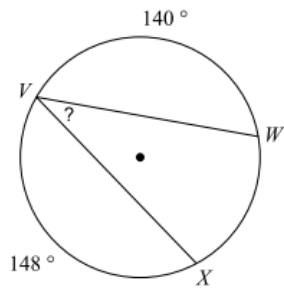
Measure of $\angle ARB$: _____

4. What arc does inscribed angle ARB subtend? _____
5. What arc does central angle AZB subtend? _____
6. What is the measure of this arc? _____
7. Summarize the relationship among a central angle, and inscribed angle, and the common subtended arc in a sentence:
8. Extend: Suppose A, Z, and B were collinear points.
What would the measure of arc AB be then? _____
What would be the measure of the inscribed angle? _____
9. Review: Draw a radius on circle Z and measure it with a ruler. Then, find the length (not the measure) of arc AB.
10. Review: Find the area of *sector* AZB.

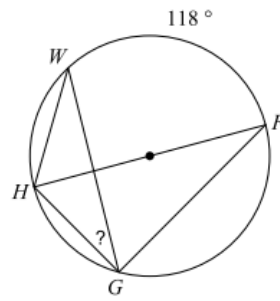


Find the measure of the indicated arc or angle.

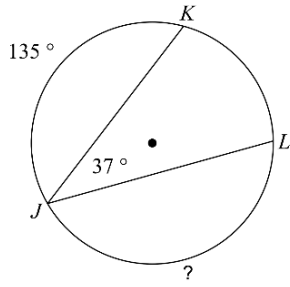
e1)



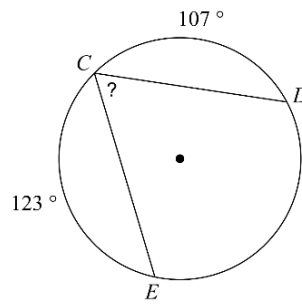
e2)



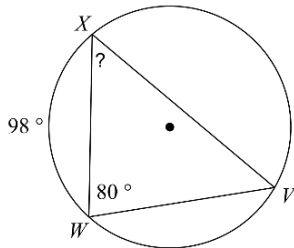
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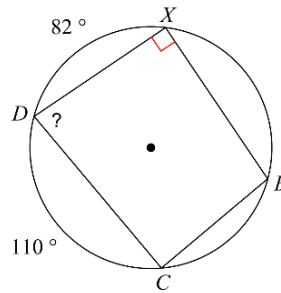
2)



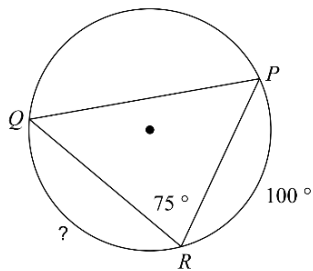
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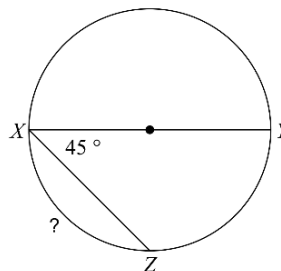
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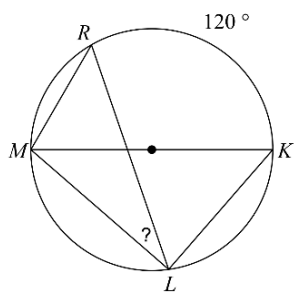
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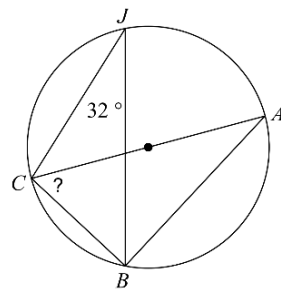
6)



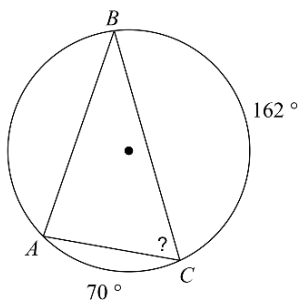
7)



8)



9)



10)

