

Unit 7: Circles

PRACTICE · SET 2

Name: _____

Date: _____

Show your work and give each exact answer; use $^\circ$ for degrees, π for pi, and $\text{sqrt}()$ for square roots.

1. A central angle of a circle measures 72° . What is the measure of the arc it intercepts?

Answer: _____

3. An inscribed angle measures 40° . What is the measure of its intercepted arc?

Answer: _____

5. Triangle ABC is inscribed in a circle so that side AC is a diameter. What is the measure of angle B?

Answer: _____

7. From an external point P, the distance to the center of a circle is 13 and the radius is 5. Find the length of the tangent segment from P to the circle.

Answer: _____

9. From an external point, two tangent segments are drawn to a circle. One tangent segment has length 15. What is the length of the other tangent segment?

Answer: _____

2. An inscribed angle in a circle intercepts an arc measuring 130° . What is the measure of the inscribed angle?

Answer: _____

4. A circle has radius 9. Find the exact arc length of an arc whose central angle is 80° . (Leave the answer in terms of π .)

Answer: _____

6. Two chords intersect inside a circle. One chord is divided into segments of length 6 and 8. The other chord is divided into segments of length 4 and x . Find x .

Answer: _____

8. A central angle measures 110° . What is the measure of the major arc cut off by that central angle?

Answer: _____

10. Points A, B, and C lie in order on a circle. Arc AB = 70° and arc BC = 85° . Find the measure of arc AC (the arc from A to C passing through B).

Answer: _____

11. A tangent and a chord meet at a point on a circle, forming an angle that intercepts an arc of 100° . What is the measure of the tangent-chord angle?

Answer: _____

12. Two secants drawn from an external point intercept a far arc of 120° and a near arc of 40° . Find the measure of the angle formed at the external point.

Answer: _____