Geometry

10.5 Apply Other Angle Relationships in Circles

One-half

tangency

tangent

secant

If a \_\_\_\_\_\_\_\_\_ and a \_\_\_\_\_\_\_\_\_\_\_ intersect at the point of \_\_\_\_\_\_\_\_\_\_, then the measure of each angle formed is \_\_\_\_\_\_\_\_\_\_\_ the measure of its \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Intercepted arc

Secant and Tangent intersect at point P on circle S. The angle formed measures 36°. What is the measure of the intercepted arc?

= ½ arc 🡪 36° = ½ x 🡪 x = 72°

T

P

R

## Angles Inside the Circle Theorem

sum

half

angle

interior

secants

If two \_\_\_\_\_\_\_\_\_\_\_\_ intersect in the \_\_\_\_\_\_\_\_ of a circle, then the measure of an \_\_\_\_\_\_\_ formed is \_\_\_\_\_\_ the \_\_\_\_\_ of the measures of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ by the \_\_\_\_\_\_\_\_ and its \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Vertical angle

angle

Arcs intercepted

= 50, = 120. What is m∠3?

2

P

T

Q

1

3

4

R

## Angles Outside the Circle Theorem

exterior

One of each

tangents

secants

If two \_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_, or \_\_\_\_\_\_\_\_\_\_\_\_\_ intersect in the \_\_\_\_\_\_\_\_\_\_ of a circle, then the measure of the \_\_\_\_\_\_\_\_\_\_\_ formed is \_\_\_\_\_\_\_ the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the measures of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

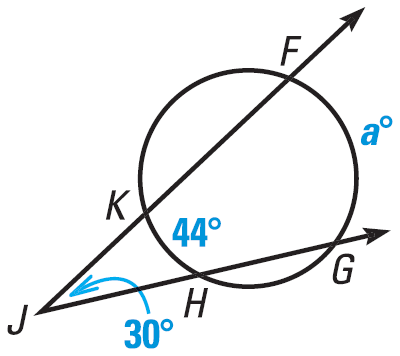
Intercepted arcs

difference

half

angle

What is the value of a?



Assignment: 683 #4-26 even, 32-39 all = 20

Extra Credit: 686 #2, 4 = +2