

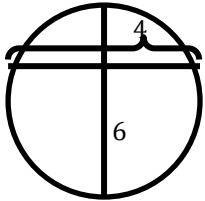
# Geometry

## 10.6 Segment Relationships in Circles

### Segments of Chords Theorem

If two \_\_\_\_\_ intersect \_\_\_\_\_ a circle, then the \_\_\_\_\_ of the measures of the \_\_\_\_\_ of the chords are \_\_\_\_\_.

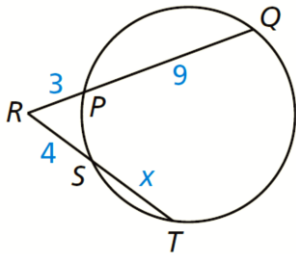
A person is stuck in a water pipe with unknown radius. He estimates that surface of the water makes a 4 ft chord near the top of the pipe and that the water is 6 ft deep. How much room is available for his head?



### Segments of Secants Theorem

If two \_\_\_\_\_ are drawn to a circle from an \_\_\_\_\_ point, then the \_\_\_\_\_ of the measures of one \_\_\_\_\_ segment and its \_\_\_\_\_ secant segment is \_\_\_\_\_ to the product of the measures of the other secant segment and its external secant segment.

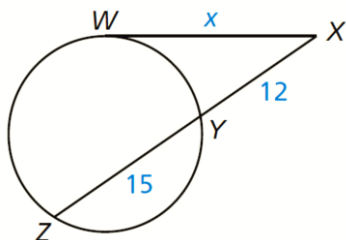
Find  $x$  in the diagram.



### Segments of Secants and Tangents Theorem

If a \_\_\_\_\_ segment and a \_\_\_\_\_ segment are drawn to a circle from an \_\_\_\_\_ point, then the \_\_\_\_\_ of the measure of the \_\_\_\_\_ segment is equal to the \_\_\_\_\_ of the measures of the \_\_\_\_\_ segment and its \_\_\_\_\_ secant segment.

Find  $x$  in the diagram.



Assignment: 553 #2, 3, 4, 6, 7, 8, 10, 11, 12, 13, 14, 15, 16, 18, 19, 25, 28, 29, 30, 31 = 20 total