10.6 Find Segment Lengths 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?

![Diagram of a circle with chords](image)

**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.

![Diagram of a circle with secants](image)

**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.

![Diagram of a circle with secants and tangent](image)

Assignment: 692 #2-24 even, 30-42 even = 19