Power Theorems

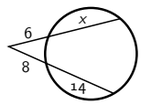
Intersecting Segments of Chords Power Theorem: If two chords intersect in the interior of a circle, then the product of the lengths of the segments of one chord is equal to the product of the lengths of the segments of the other chord.

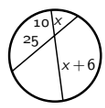
Segments of Secants Power Theorem: If two secants intersect in the exterior of a circle, the product of the length of one secant segment and the length of its external part is equal to the product of the length of the other secant segment and the length of its external part.

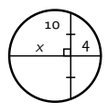
Tangent Secant Segments Power Theorem: If a tangent segment and a secant intersect in the exterior of a circle, then the square of the length of the tangent segment is equal to the product of the lengths of the secant segment and its external part.

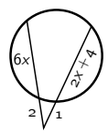
Practice Exercises

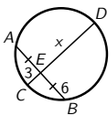
Find the value of x.

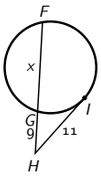
1. 

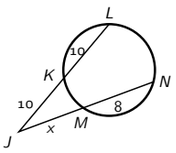
2. 

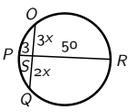
3. 

4. 

5. 

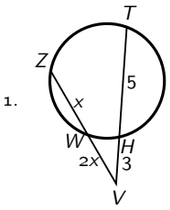
6. 

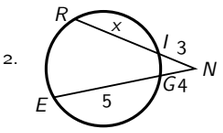
7. 

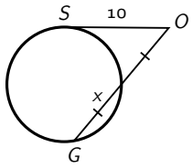
8. 

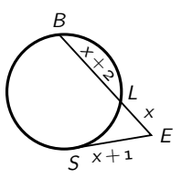
Problem Set

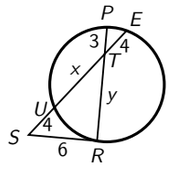
Find the value of x.

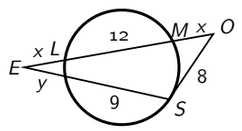
1. 

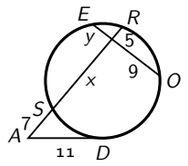
2. 

3. 

4. 

5. 

6. 

7. 

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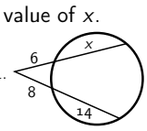

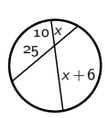

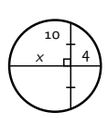

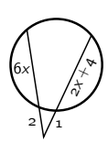

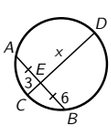

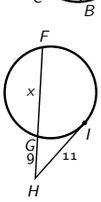

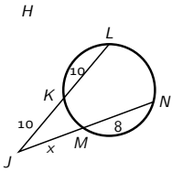

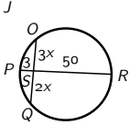

Problem Set

Find the value of x.