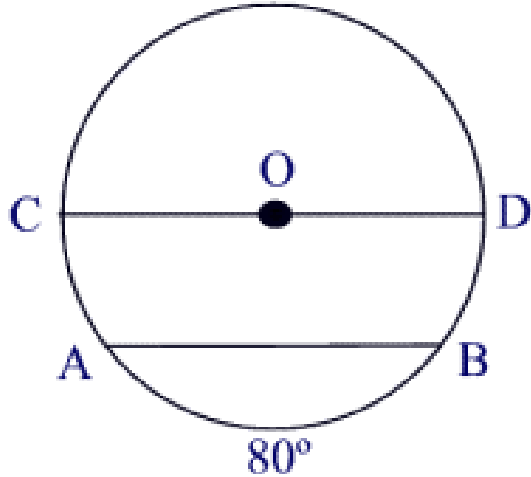


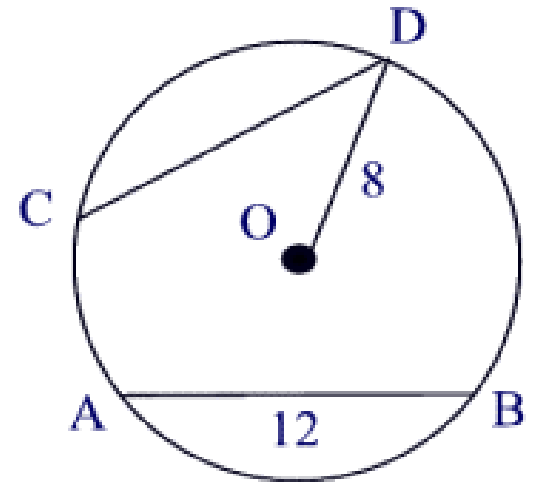
Tangent Theorems

DO NOW: Answer the following questions.



- \overline{CD} is a diameter.
- \overline{CD} and \widehat{AB} are parallel.
- Find $m\widehat{CA}$.

- \widehat{CD} and \widehat{AB} are congruent.
- Find \overline{CD} .





Tangents

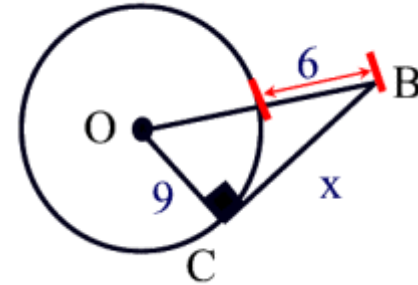
What is it?

- A *tangent* is a line that touches a circle at only one point.
- The point where the line touches the circle is called the *point of tangency*.

What does it look like?

Example:

Determine what value of x would make CB a tangent.



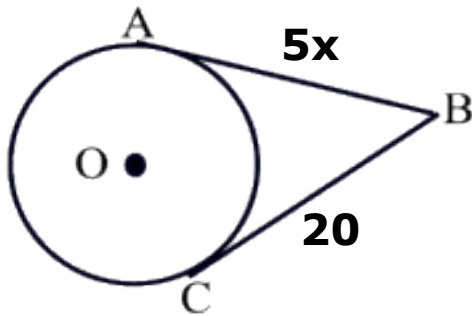


The HAT Theorem

- Tangent segments from the same external point are *congruent* (_____).
Which means?

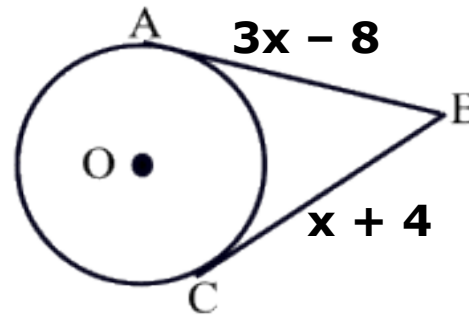
Example 1

Find x .



Example 2

Find the length of AB and BC .





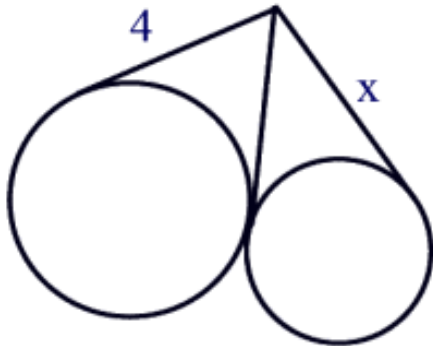
The HAT Theorem

● Happy Birthday!!!!

Example 3

Segments shown are tangents.

Find x .



Example 4

Find the perimeter of the triangle.

