Name: _____ Date: _____

TI-Nspire Technology Lesson

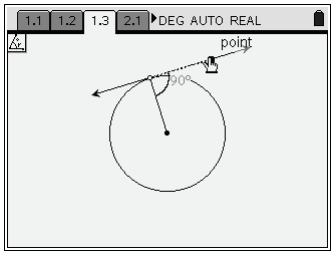
Unit 8: Verifying the Tangent and Chord Properties

On your calculator, press (home) > **7: My Documents**, then open file **u08_400**.

Verifying the Tangent Property

On page 1.3, a tangent to the circle and a radius from the point of tangency to the centre of the circle are shown.

1. Measure the angle the radius makes with the tangent.



- Press (menu), then select **7: Measurement > 4: Angle.**
- Click on the centre of the circle, then on the point of tangency, and finally on the tangent line.
- Press (esc).

Does the angle measure match what you have learned about a tangent and radius? If not, suggest a reason why.

2. Drag the point of tangency to different positions on the circle to check the results for other tangent lines.
What do you notice?

3. Drag the circle to investigate the property for circles of different sizes.
What is always true about the angle between a tangent to a circle and a radius at the point of tangency?

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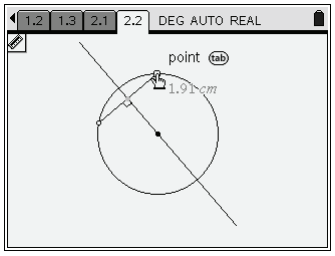
Verifying the Chord Property

On page 2.2, a chord in a circle and a line perpendicular to the chord, through the centre of the circle are shown.

1. For each endpoint of the chord, measure the distance from the endpoint to the point of intersection of the chord and the perpendicular.

- Press (menu), then select **7: Measurement > 1: Length.**
- Click on the point of intersection, then double-click on an endpoint of the chord.
- Click on the point of intersection, then double-click on the other endpoint of the chord.
- Press (esc).



What do you notice?

2. Drag the endpoints of the chord to different positions on the circle to check the results for other chords.
What do you notice?

3. Drag the circle to investigate the property for circles of different sizes. What is always true about a perpendicular from the centre of a circle to a chord in the circle?

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