



A Modular Presentation System for the Calculus Sequence

2.1 The Tangent and Velocity Problems

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What is a Tangent to a Curve?

- ▶ What is a Tangent to a Curve?
- ▶ Finding a Tangent to the Graph of a Function

▲ What is a tangent line?

The word *tangent* is derived from Latin word *tangens*, which means “touching.”

▲ Why we study tangent?

Rates of Change: The Velocity Problem – “Average vs. Instantaneous.”



Finding a Tangent to the Graph of a Function

◊ What is a Tangent to a Curve?

◊ Finding a Tangent to the Graph of a Function

- ▲ What we need to determine a line equation?
 1. A point on the line.
 2. The slope of the line
- ▲ How we determine the slope of a tangent line? –
Using secant lines.