

Definition of the derivative

After completing this section, students should be able to do the following.

- Use limits to find the slope of the tangent line at a point.
- Understand the definition of the derivative at a point.
- Compute the derivative of a function at a point.
- Estimate the slope of the tangent line graphically.
- Write the equation of the tangent line to a graph at a given point.
- Recognize and distinguish between secant and tangent lines.
- Recognize different notation for the derivative.
- Recognize the tangent line as a local approximation for a differentiable function.