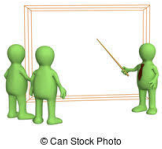
2.2 Differentiability

What

If x_0 is a point in the domain of a function f, then f is said to be differentiable at x_0 if the derivative $f'(x_0)$ exists. This means that the graph of f has a non-vertical tangent line at the point $(x_0, f(x_0))$. The function f may also be called locally linear at x_0, as it can be well approximated by a linear function near this point.

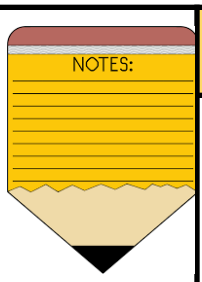
Objectives

- Differentiability implies local linearity.
- Differentiability implies continuity.
- Finding derivatives using a calculator.
- Intermediate Value Theorem.
- How the derivative at a point might fail.



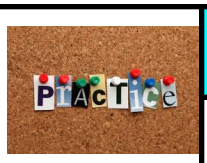
Videos

3.2 Video (video notes)



Extra Practice

Definition of Differentiability
How to determine if a function is differentiable
Pg 111: 3, 7, 8, 12, 14, 17, 21



What did you learn today?

Write a sentence at the bottom of your notes explaining what you learned in this lesson.