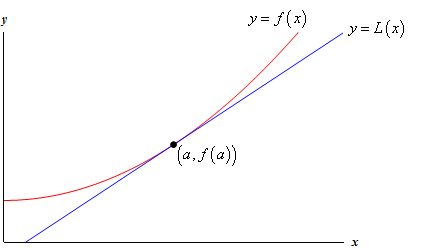
Khyle Calpe

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10/25/2017

Math 31A Lecture Notes: Linear Approximation



Definition; *Linear approximation of f at a*: Assume f(x) is differentiable at x = c, then

How far is from

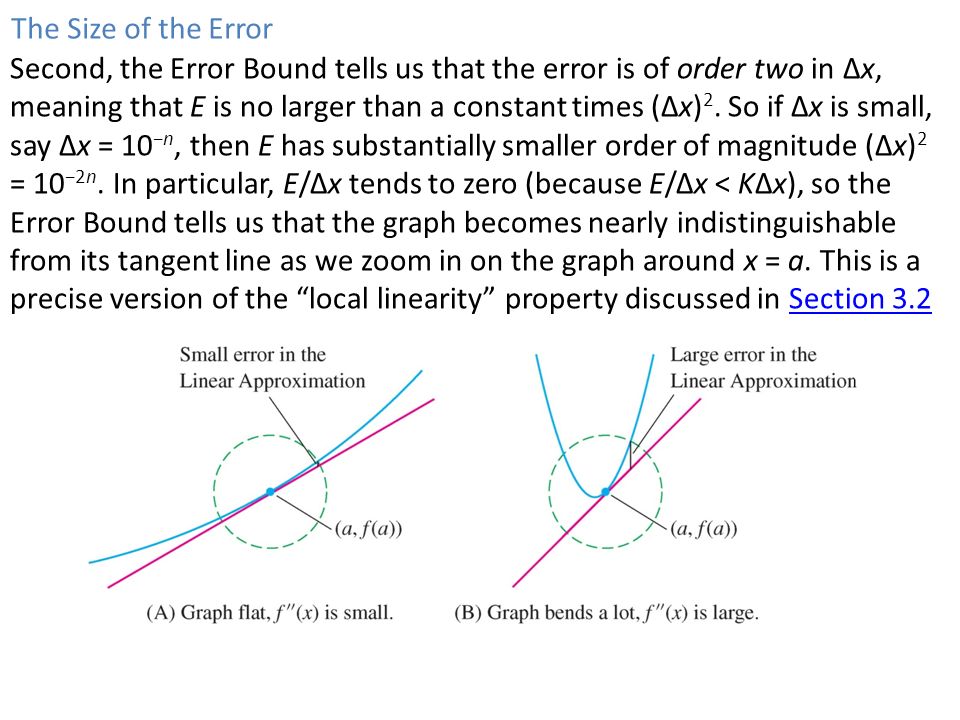
\*How large is the error between the approximation and the tangent line?

Theorem:

K = maximum value of in the interval [a, a + Δx]

Assume that f is twice differentiable.

Hence, E is small if is small



Correlation:

If on an interval [a, b] the f = L on [a, b] and if, furthermore, on [a, b], then f is constant.

Aside:

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\*