

EMAIL - 5%  
HOME - 20%  
WRITING PROJECTS - 20%  
Tests - WebAssign - 25% - LOCKDOWN BROWSER  
Midterm & Final - Written - Go to Horizon Hall  
- 30%

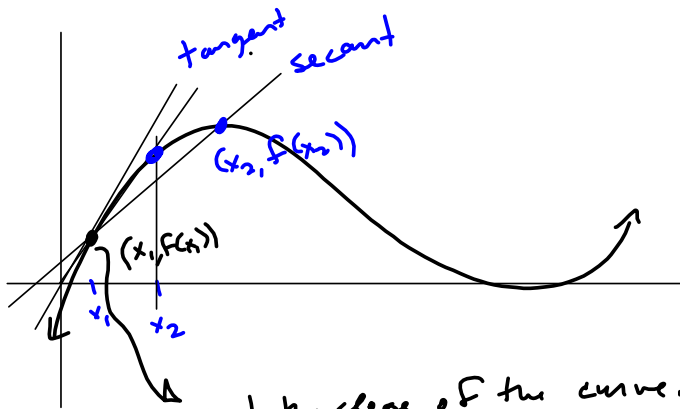
CAMSCANNER APP }  
ROCKET BOOK } MAKE PDFs of  
Printer/Scanner } WRITTEN

Writing Projects: White background, Dark (black or blue) Writing, leave lots of space,  
Leave a Margin. SORTED OUT IN WRITING PROJECT 0.

4 PROJECTS:

0 - Making PDFs and reviewing Trig

1 -



Want the slope of the curve.  
All we know is slope between 2 points.

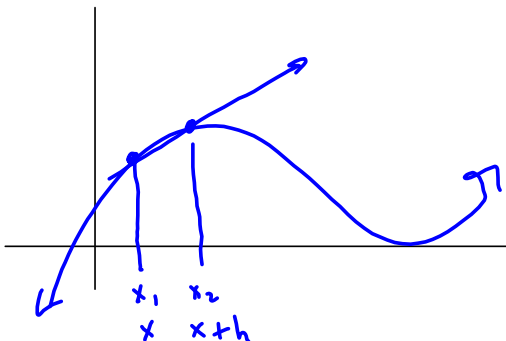
Slope of tangent line is goal.

$$\text{We know } m_{\text{sec}} = \frac{y_2 - y_1}{x_2 - x_1}$$

$$= \frac{f(x_2) - f(x_1)}{x_2 - x_1}$$

$$= \text{Average Slope} \quad \xrightarrow{x_2 \rightarrow x_1} \text{Tangent slope}$$

$$= m_{\text{tan}} = \lim_{x_2 \rightarrow x_1} \frac{f(x_2) - f(x_1)}{x_2 - x_1}$$



$$\frac{f(x_2) - f(x_1)}{x_2 - x_1} = \frac{f(x+h) - f(x)}{h}$$

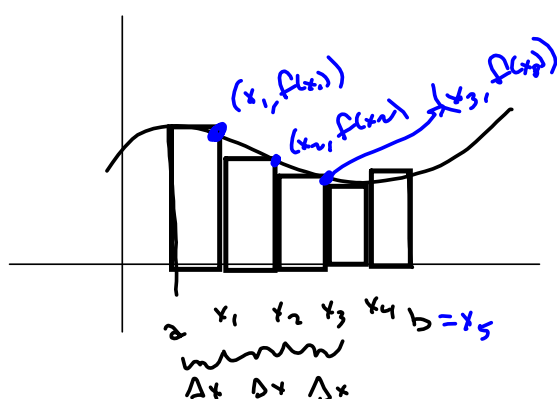
= TIDY Difference Quotient

$$x+h - x = x_2 - x_1 = h$$

Differential Calculus is just "slope with limits."

## Integral Calculus (Chapter 4)

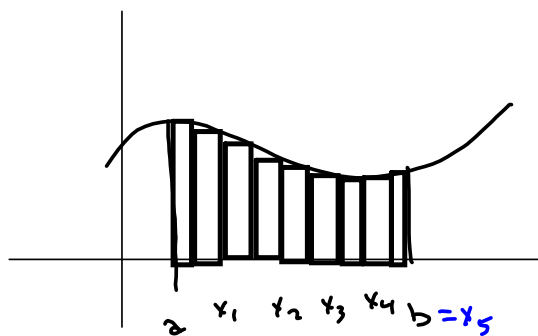
Find the area under a curve.



Area under  $f$  between  
 $x=a$  &  $x=b$  is

$$\begin{aligned} \tilde{A} &\approx \sum A(x_i) = \sum f(x_i) \Delta x \\ &= f(x_1) \Delta x + f(x_2) \Delta x + \dots + f(x_5) \Delta x \end{aligned}$$

$$\text{AREA} = \lim_{\Delta x \rightarrow 0} \sum f(x_i) \Delta x = \int_a^b f(x) dx = \text{Definite Integral}$$



MORE RECTANGLES

→  
 Better estimate of  
 area.