

Thursday March 2 Math 3H

- Turn in and get a grade for all 3 ACT Practice Tests-pass them back.
- Do 10 corrections per test to get full credit. Due March 10th.
- Turn in 8.1 Box Problem
- 8.2 Average Rate of Change Notes

Feb 28-11:07 AM

Questions...

$$\frac{(11)k-1}{(k-2)(k-6)} + \frac{4k}{(k-2)(k-6)}$$

$$\frac{k^2-3k+2}{(k-2)(k-6)} + \frac{4k^2-24k}{(k-2)(k-6)}$$

$$\frac{5k^2-27k+2}{(k-2)(k-6)}$$

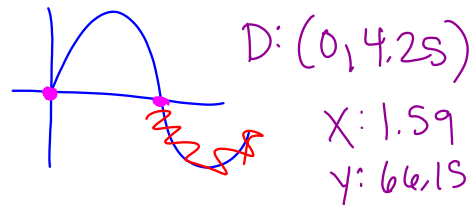
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③ 8.5x11



$$V(x) = (11-2x)(8.5-2x)x$$

Mar 2-7:59 AM



Mar 2-8:00 AM

height: 1.59 in  
 Length: 7.82 in  
 width: 5.32 in  
 volume: 66.15 in<sup>3</sup>

Mar 2-8:03 AM

8.2 Average Rate of Change

Another Word for Average Rate of Change:

Slope  $m = \frac{y_2 - y_1}{x_2 - x_1}$

Feb 28-9:17 AM

Ex 1)  $f(x)=3x^2-x+5$  For the interval  $[-1,3]$   
 Find the y value at each x-value: Choose one method.

1. Plug in the calculator then do 2nd trace #1
2. Plug into the equation <sup>or</sup> and simplify

$f(-1)=9$   
 $f(3)=29$

This gives you two ordered pairs  $(-1, f(-1))$  and  $(3, f(3))$ .  
 $(-1, 9)$  and  $(3, 29)$   
 $x_1, y_1$        $x_2, y_2$

Use these ordered pairs to find the slope:

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{(29-9)}{(3-(-1))} = \frac{20}{4} = 5$$

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Example 2)  $f(x)=-x^2-4$ ; for the interval  $[2,b]$

$f(2)=-8$   
 $f(b)=-b^2-4$

$$\frac{-8 - (-b^2 - 4)}{2 - b} = \frac{-8 + b^2 + 4}{2 - b} = \frac{b^2 - 4}{2 - b}$$

$$\frac{(b-2)(b+2)}{-1(b-2)} = -b-2$$

Mar 1-3:13 PM

Example 3) Find the average rate of change from the table below from June to September

6      9

Average Maximum Temperature (°F)	
Nueva School, Hillsborough, CA	
Jan	55.9
Feb	59.3
Mar	61.2
Apr	64.3
May	66.8
Jun	69.9
Jul	71.1
Aug	71.7
Sep	72.7
Oct	69.7
Nov	62
Dec	56.1

$\frac{(72.7 - 69.9)}{(9 - 6)} = .93$

The temp increased .93° per month between June and Sept.

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Example 4) Find the average rate of change each interval given below.

$\frac{-8}{2}$

a)  $[-4, -2]$   $\frac{(2 + +6)}{(4 + +2)} = -4$

b)  $[-3, 1]$  0

c)  $[-2, 2]$  2

Mar 1-3:15 PM