

Precalc Warm Up – 9/22/10

Name: _____

Period: _____

- 1) A train leaves Chicago headed for DC and travels at 80 miles per hour. At the same time, another train leaves DC for Chicago and travels at 60 miles per hour. How many hours will it take the trains to meet each other if the distance between DC and Chicago is 700 miles?

Precalc

MASTERY CHECK Preparation

Name: _____ Date: _____ Period: _____

How do you feel about each objective? Place yourself on the continuum

1) Students will be able to find the average rate of change of a function given a graph, a table and an equation.

<---Confused-----Unsure-----Confident--->

2) Students will be able to analyze multiple data sets representing real world phenomena graphed on one graph.

<---Confused-----Unsure-----Confident--->

3) Students will be able to determine if a function is increasing/decreasing from its graph and positive/negative from its graph and equation.

<---Confused-----Unsure-----Confident--->

4) Students will be able to solve rate problems including problems with multiple rates.

<---Confused-----Unsure-----Confident--->

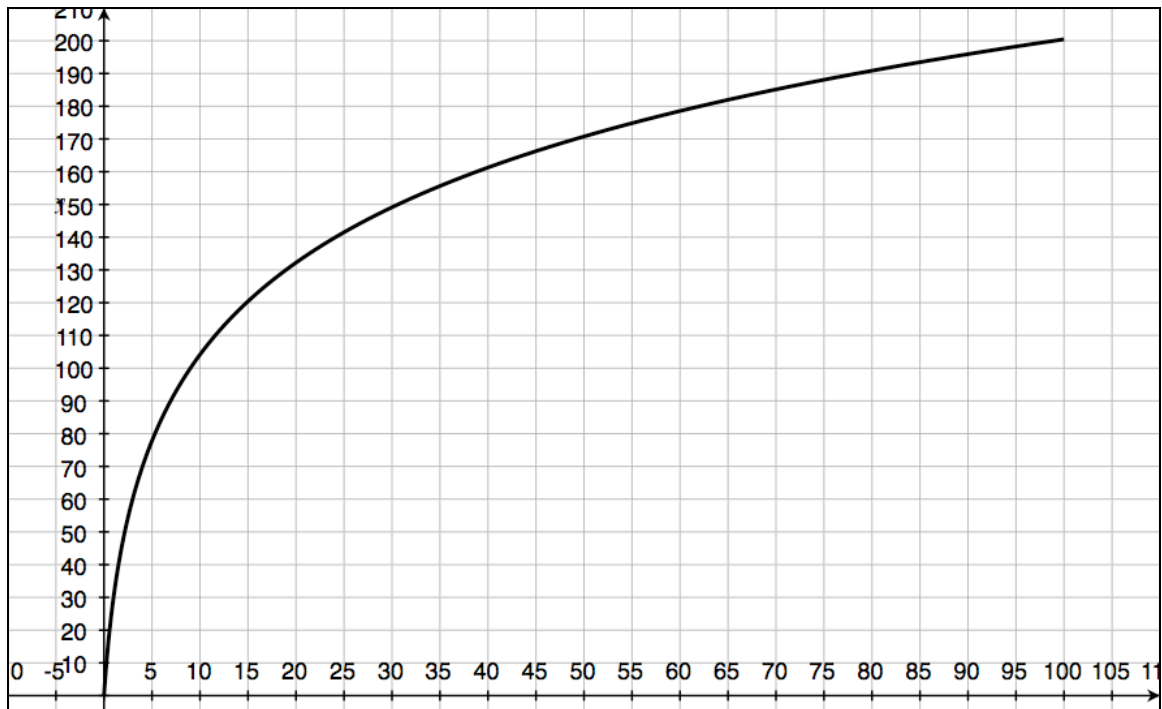
FOR RESOURCES ON ALL OF THESE OBJECTIVES GO TO:

<http://chavezmath.wikispaces.com/>

If you need an invite email Mr. Monte-Sano at
alex.monte-sano@chavezschools.org

1) Students will be able to find average rate of change of a function given a graph, a table and an equation.

- 1) Consider the following graph of the number of students checked at the front gate versus time (in minutes). Use it to answer the following questions. Be sure to include proper units if appropriate.



- Is the function increasing, decreasing or neither?
- What is the average rate of students checked per minute at the gate between $t = 0$ and $t = 100$?
- What is the average rate of students checked per minute at the gate between $t = 0$ and $t = 30$?
- Is the rate of students checked greater on the interval $[0,100]$ or the interval $[0,30]$?

- 2) The following table represents the height of water in a bathtub over time as you are filling it up. Use the table to answer the following question.

Time (in minutes)	0	1	2	3	4	5
Height of the water (in inches)	0	2	6	12	20	30

What is the average rate of change of the height of water in the bathtub from minute 0 to minute 5? Be sure to include proper units on your answer.

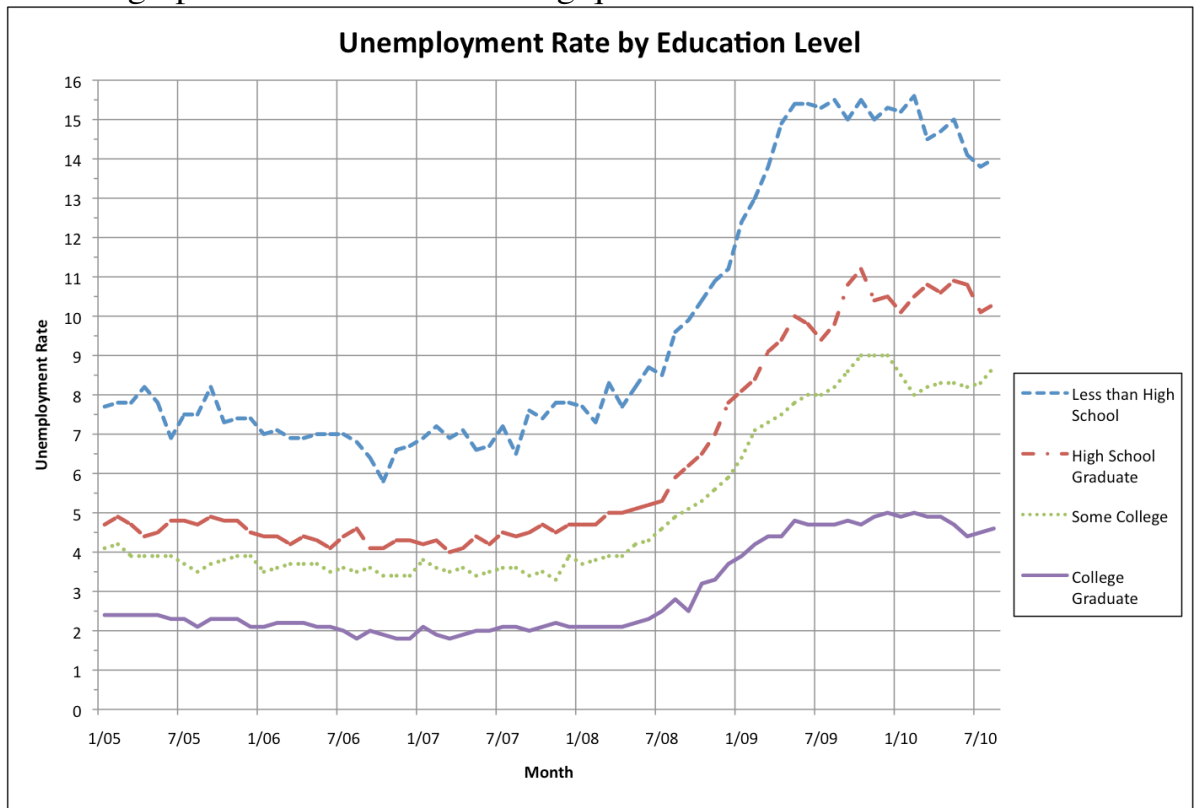
- 1) The following equation represents the area of a square versus the length of its sides (x is the length of the side in centimeters and $f(x)$ is the area in square centimeters).

$$f(x) = x^2$$

- What is the average rate of change of the area on the interval from $x=1$ to $x=3$?
- What is the rate of change of the area on the interval from $x=2$ to $x=5$?

2) Students will be able to analyze multiple data sets representing real world phenomena graphed on one graph.

Use the graph to answer the following questions

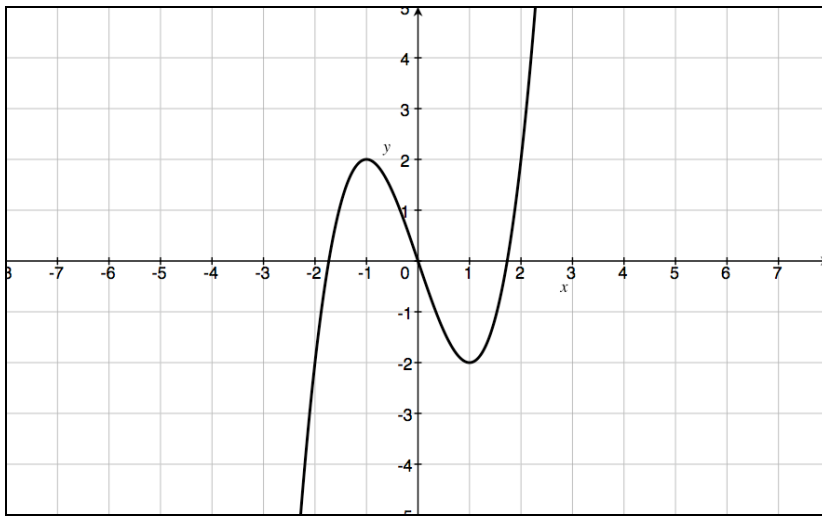


- People with which level of education had the highest unemployment rate at 1/10? What was their unemployment rate?
- What was the average rate of change in unemployment for people with less than a high school education from 7/07 to 1/09?
- State whether unemployment increased more for people with some college education or college graduates from 1/08 to 1/10. You must use math to know if your answer is correct.

3) Students will be able to determine if a function is increasing/decreasing from its graph and positive/negative from its graph and equation.

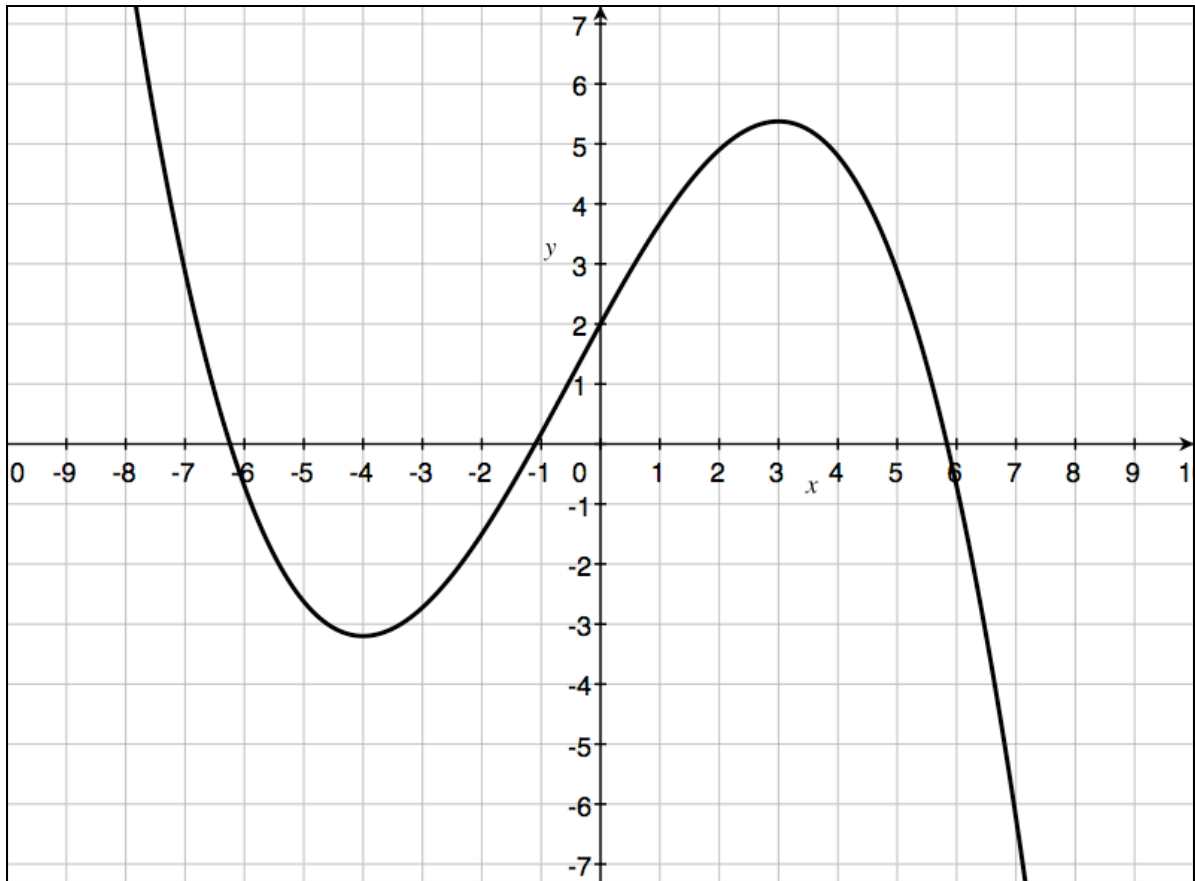
- 1) Consider the function $f(x) = 3x^2 - 15$. Answer the following questions (you must show your work):
- a) When $x=2$ is $f(x)$ positive or negative?
 - b) When $x=4$ is $f(x)$ positive or negative?
 - c) When $x=-3$ is $f(x)$ positive or negative?

- 1) Consider the graph of $f(x)$ shown below. Which of the following statements is true when $x=-2$?



- a) $f(x)$ is positive and increasing
- b) $f(x)$ is positive and decreasing
- c) $f(x)$ is negative and increasing
- d) $f(x)$ is negative and decreasing

Use the following graph to determine if the function is **positive or negative** and **increasing or decreasing** at the given x-value.



1) at $x=-5$

2) at $x=-2$

3) at $x=0$

4) at $x=4$

4) Students will be able to solve rate problems including problems with multiple rates.

- 1) Ms. Reilly can check bags at a rate of 2 bags per minute. How many bags can she check in 25 minutes?

- 2) Ms. Reilly can check bags at a rate of 2 bags per minute but Mr. Eden checks bag at a rate of 4 bags per minute. How long will it take them if they need to check 300 students in the morning?

- 3) Ms. Reilly and Mr. Eden decide that they need to check bags more quickly so they get Mr. McCarty to help them. How many bags per minute will Mr. McCarty need to check in order to ensure that the 300 students get their bags checked in 25 minutes?

Precalc Exit – 9/22/10

Name: _____ Period: _____

1) What is the objective that you need study the most?

2) What are you going to do to prepare for that objective?

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