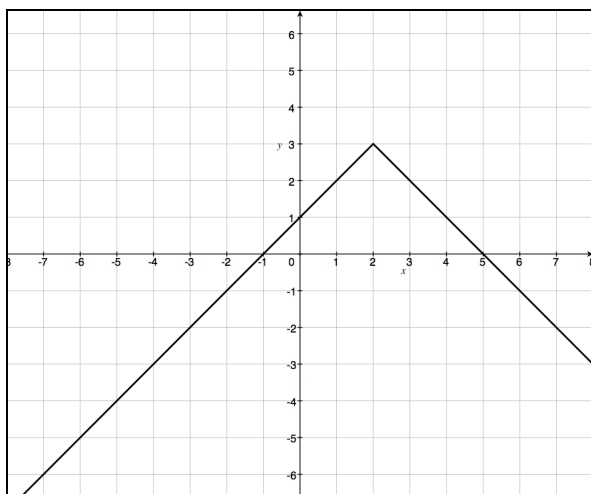


Precalc Warm Up – 8/30/10

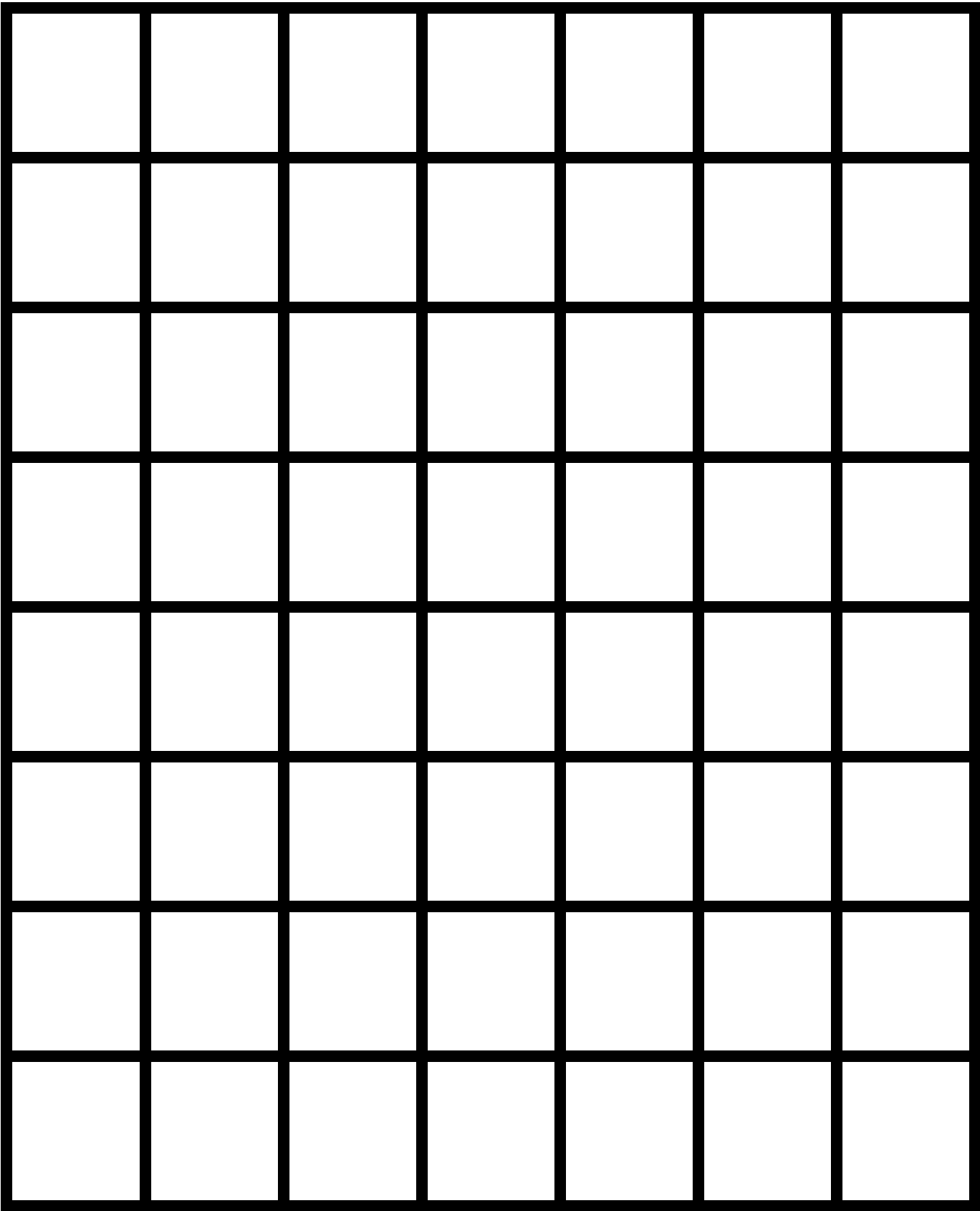
Name: _____

Block: _____

- 1) Is the following function strictly increasing, strictly decreasing or neither?



- a. State the interval on which the function is increasing.
- b. State the interval on which the function is decreasing.



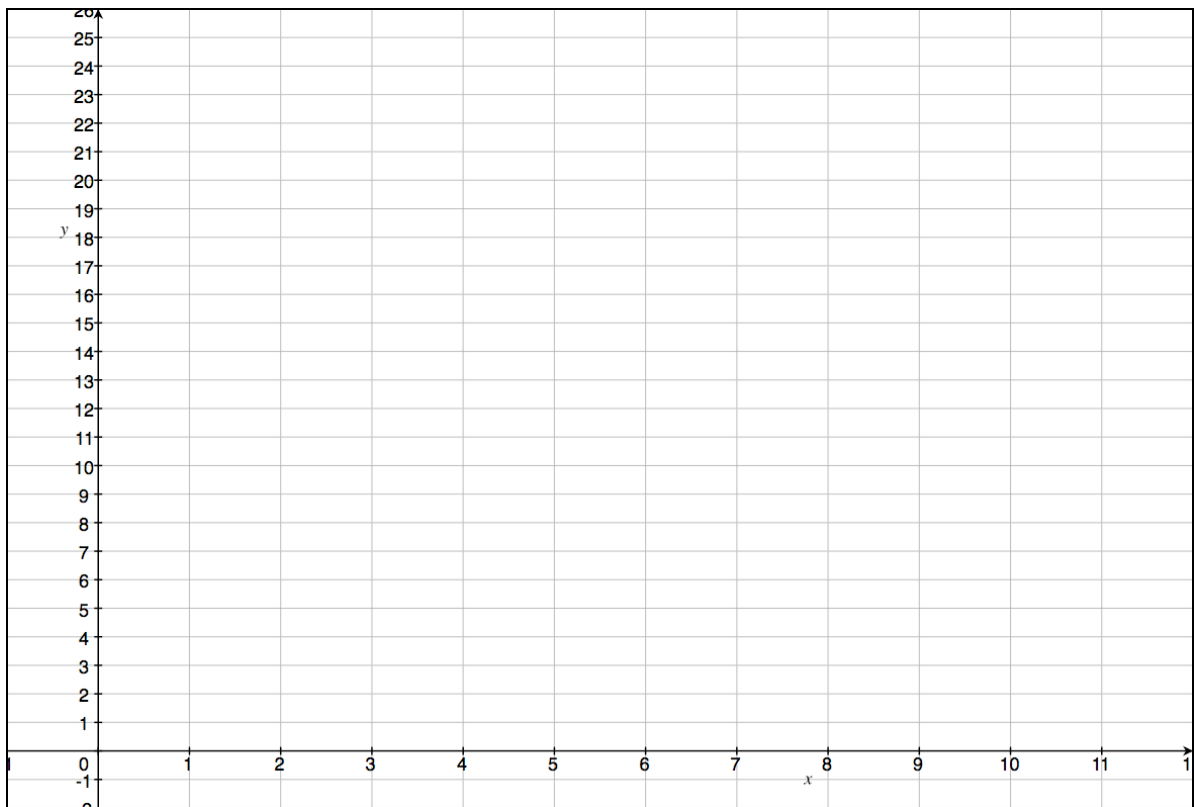
REPRESENTING THE WORLD CONCEPT BUILDER

Name:_____Date:_____Period:_____

Concept – Students will be able to turn a verbal model into a sketch
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Consider Mr. Monte-Sano's situation:

At the beginning of the year almost every student turns in her homework. But as the year goes along fewer students complete their homework. Mr. Monte-Sano keeps track of his students' homework and describes it to you as follows, “ On the first day of school, which I call Day 0, 24 students handed in homework. Everyday after, 2 fewer students handed in homework until nobody handed homework in on Day 11.”



Important decisions to make:
Scale

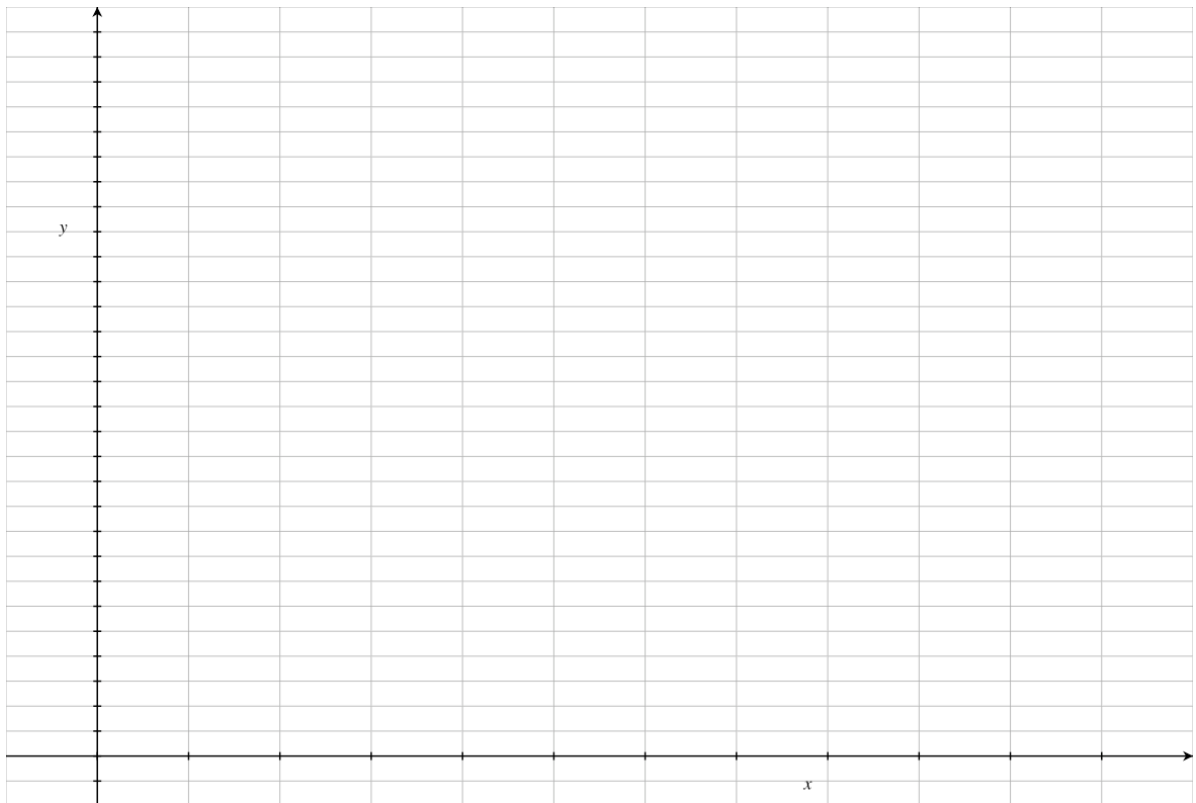
y-intercept

increasing/decreasing

slope

Turn the following model into a graph.

Jordan likes to buy songs from the Internet. He wants to be careful about spending too much money. He keeps track of the amount he spends each day for one week. On day 1 he spends \$2. Each day he increases the amount he spends by \$4. He stops keeping track of how much he spends on day 7.



PRACTICE

Directions – Convert the following verbal models into graphs using graph paper.

- 1) If Mr. Monte-Sano works efficiently he can grade 20 exit slips in 10 minutes. Each additional 10 minutes he works he can grade another 10 exit slips.
- 2) The cost to go bowling is as follows: You pay \$5 to rent the shoes and \$3 for each game you bowl. Graph the cost of going bowling depending on how many games you play.
- 3) The number of students who can be served lunch depends on the number of cafeteria workers. If there are no cafeteria workers then 50 students can serve themselves lunch. For each cafeteria worker, 100 students can be served lunch.
- 4) The time it takes to download a song from the Internet varies according to how large the song is. A song that is 100 megabytes takes 2 minute to download. Each additional 100 megabytes requires and additional 2 minutes to download.

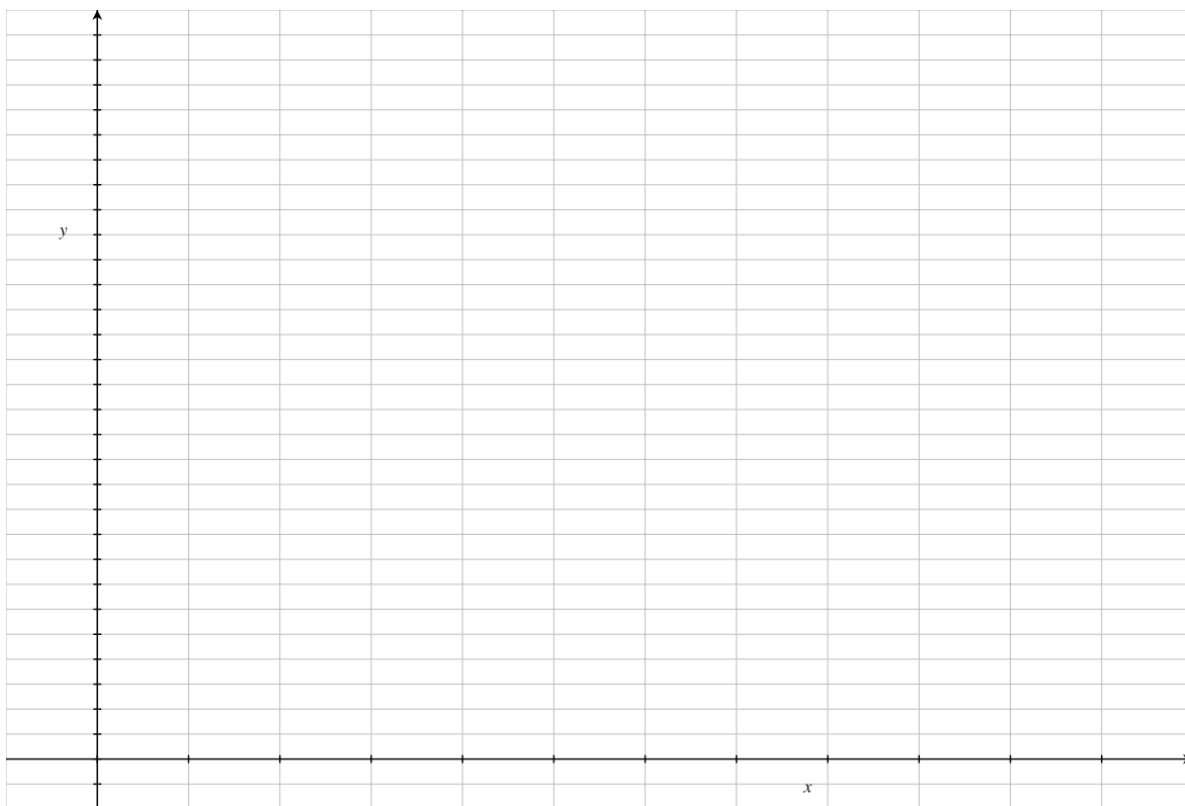
Precalc – Exit Slip – 8/30/10

Name: _____

Block: _____

1) Turn the following verbal model into a graph.

The number of students who enroll at Chavez depends on the number of bus advertisements that Chavez buys. If Chavez buys no ads then 150 students enroll. For every 10 ads that Chavez buys another 25 students enroll at Chavez.



PERIOD:

Monte-Sano

STUDENT #:

Precalc – Homework – 8/30/10

LAST NAME, FIRST NAME: _____

1) Consider the model from today's class:

Jordan likes to buy songs from the Internet. He wants to be careful about spending too much money. He keeps track of the amount he spends each day for one week. On day 1 he spends \$2. Each day he increases the amount he spends by \$4. He stops keeping track of how much he spends on day 7.

Use that model to answer the following questions (sketch a graph to help):

- a. How much money did Jordan spend on day 7?
- b. On which day will Jordan spend \$22?
- c. If Jordan has \$40 to spend, on what day will he run out of money?

PERIOD:

Monte-Sano

STUDENT #:

2) Graph the following piecewise function ON A SEPARATE piece of paper.

a. $f(x) = \begin{cases} 2x - 3, & x > 4 \\ -0.5x + 7, & x \leq 4 \end{cases}$

b. $f(x) = \begin{cases} 10, & x < 5 \\ 2x, & x \geq 4 \end{cases}$