RULES:

Every team does every problem.

Answers MUST go on your own paper. The group answer goes on the whiteboard.

I will give a 20 second timer. Your group's answer MUST go up when the timer goes off!

$100

Find the slope both ways: by graphing them AND by using the formula. Show your work for both methods. (That means draw the points and the triangle!)

(-1, 8) and (2, 7)

$100

Slope = -1/3

Scores

$200

Solve WITHOUT a graph: Line M goes through (3, 6) and (4, 2), and Line N goes through (-1, 3) and (1, -2). Find the slope of both lines and tell which line is steeper.

$200

Slope of line M: -4

Slope of line N: -5/2 or -2.5

Line M is steeper

Scores

$300

The slope between point A and (2, 3) is 4. Give three different possibilities for point A.

$300

(3, 7); (4, 11); (1, -1); (0, -5); (-1, -9)

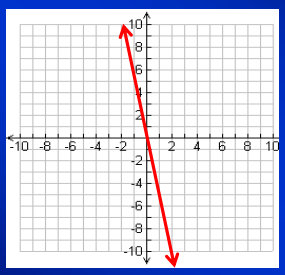
Scores

$100

Graph the equation:

$$y = -5x$$

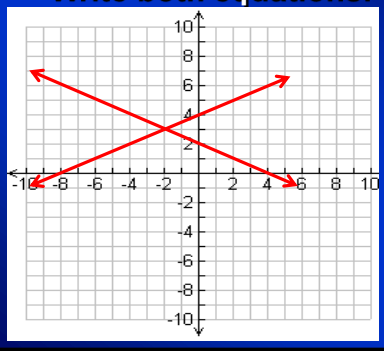
$100



Scores

$200

Write both equations:



$200

$$y = \frac{1}{2}x + 4$$

$$y = -\frac{1}{2}x + 2$$

Scores

$300

Find the equation of the line that goes through the points (2, 1) and (3, -1)

$300

y = -2x + 5

(Easiest method is to graph both points, then find the slope and the y-intercept)

Scores

$100

Patricia's parents kept track of her height from year to year. If you made a graph of this data, should you connect the points? Why or why not?

Age in years(x)	Height in inches (y)
5	38
6	40
7	42
8	44
9	46

$100

Yes; the numbers in between the values in the table make sense. She doesn't instantly go from 38 to 40 inches! In part of a year she grows part of the 2 inches.

Scores

$200

The Brown family just got a new puppy. If x is the age of the dog in years, then the weight (in pounds) of the dog y can be modeled by the equation y = 2x + 5.

a) What is the slope, and what does it represent in terms of the situation?

b) What is the y-intercept, and what does it represent in terms of the situation?

$200

Slope = 2; the dog is growing 2 pounds per year

Y-intercept = 5; the dog was originally 5 pounds

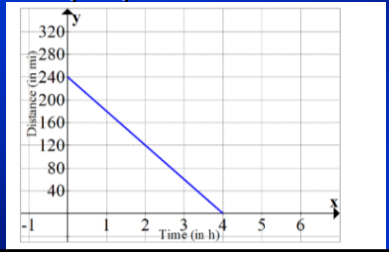
Scores

$300

Rick and Carl are going on a road trip. The graph shows the distance remaining after x hours.

a) Write an equation in slope-intercept form.

b) Say what the slope represents in terms of the situation.



$300

a) y = -60x + 240

b) Each hour, their distance remaining goes down by 60. (In other words, they are driving 60 miles per hour)

Scores

$100

Is this a constant rate of change? Show your work.

x	y
0	4
2	20
4	36
8	60
9	68

$100

No – the rate of change for the interval from 4 – 8 is only 6, the rate of change for the other intervals is 8.

Scores

$200

Melinda is reading a book. At 2:05, she is on page 143. At 2:23, she is on page 152. If she keeps reading at this pace, what page will she be on at 2:37?

$200

Page 159

(She is reading ½ a page every minute)

Scores

$300

Joey bought a plant. "x" represents is the number of weeks since Joey bought it and "y" represents the plant's height in inches. Assume the plant grows at a constant rate. How fast is the plant growing, and how tall was the plant when he bought it?

x	y
2	8
5	12.5
8	17
11	21.5
14	26

$300

1.5 inches per week; originally 5 inches tall

Scores

$100

Phil has $200 already and begins a new job where he earns $12 per hour. The amount of money Jill has after working x hours is represented by the equation y = 15x + 100. Who will have more money after working a 40 hour week?

$100

Jill (she will have $700; Phil will only have $680)

Scores

$200

John and Paul each had a big math assignment to do. The number of problems John had left is represented by the equation y = -4x + 50, where x represents the number of minutes he has been working. The number of problems Paul has left is given in the table. Who was working faster?

# of minutes	0	2	5	7	11
# problems left	60	54	45	39	27

$200

John (4 problems per minutes; Paul only does 3 problems per minute)

Scores

$300

Tree A was 25 feet tall 5 years after it was planted. It was 29 feet tall 6 years after it was planted. Tree B was 32 feet tall 5 years after it was planted, and 38 feet tall 6 years after it was planted. Which tree was taller when it was planted, and how much taller was it?

$300

Tree A; 3 feet taller (5 ft. vs. 2 ft.)

Scores

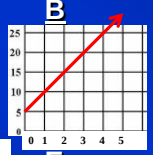
FINAL JEOPARDY

Put these in order from smallest slope to largest slope.

A

x	0	1	2	3
y	101	105	109	113

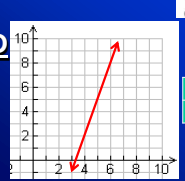
B



C

y = 1.5 + 8x

D



E

x	0	2	4	6
y	24	31	38	45

F

Between (-7, 2) and (-5, 15)

FINAL JEOPARDY

D (m = 3)

E (m = 3.5)

A (m = 4)

B (m = 5)

F (m = 6.5)

C (m = 8)

Scores