TWMM Unit Test Practice

Write the equation of the line given the following information.

through: $(0, 2)$, slope $= -3$

through: $(5, 1)$, slope $= \frac{4}{5}$

through: $(5, -4)$, slope $= -\frac{6}{5}$

through: $(2, 2)$, slope $= \frac{1}{2}$

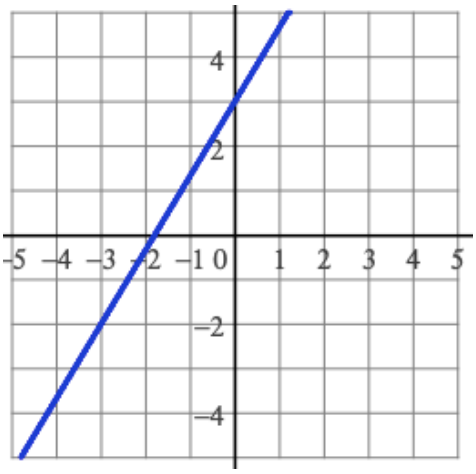
through: $(-3, 5)$ and $(0, -4)$

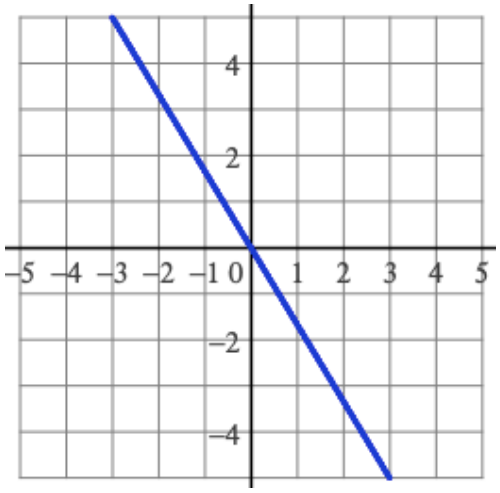
through: $(5, 3)$ and $(-1, 5)$

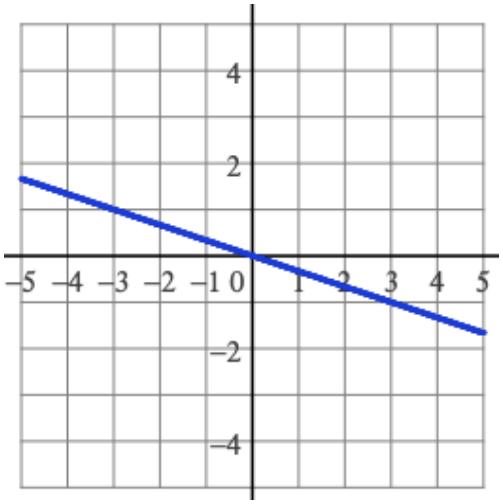
through: $(-3, -4)$ and $(4, 3)$

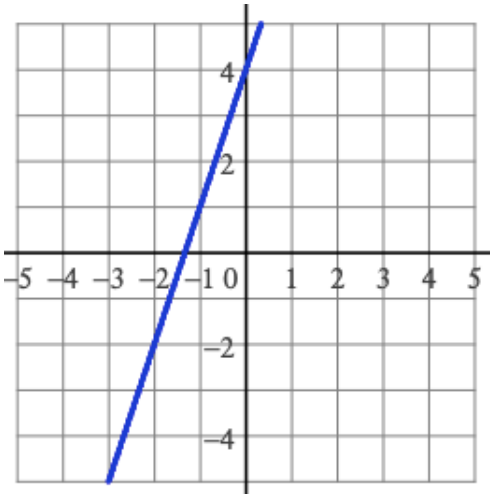
through: $(-4, 2)$ and $(1, -5)$

Write the equation of the line in each graph.









Does the data in the tables represent a linear relationship? If yes, write the equation, if no explain why not.

x	y
1	10
3	4
5	-2
7	-8

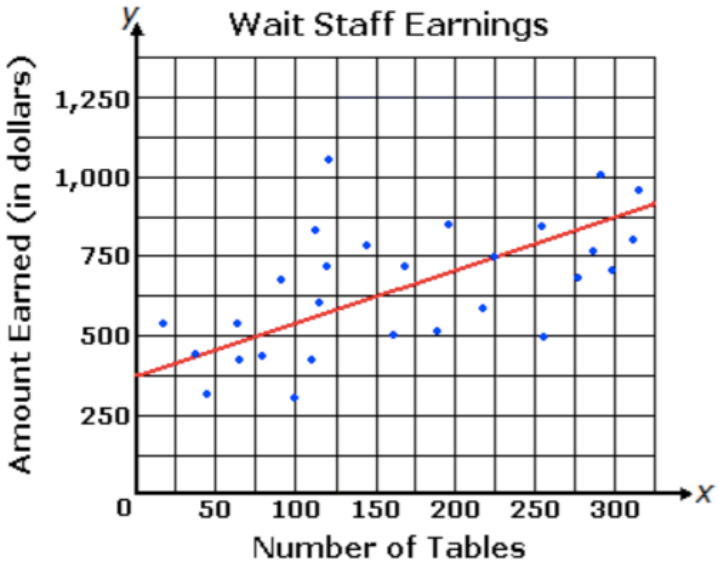
x	y
45	100
46	103
47	106
48	109

x	y
1	5
3	7
5	11
7	16

x	y
10	10
16	22
20	30
28	46

1. The graph below shows a line of best fit for data collected on the amount earned by servers last week in relation to the number of tables they served.

   a. Write the equation for the line of best fit.



   b. What does the value of the slope represent in the context of this problem?

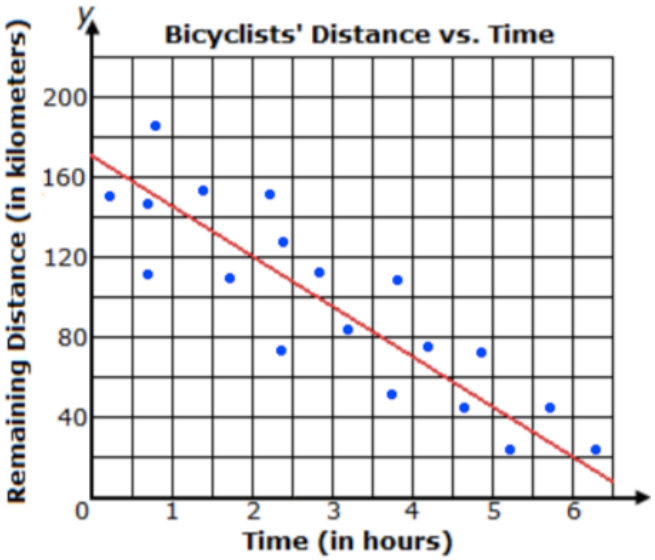
   c. What does the value of the y-intercept represent in the context of this problem?

   d. Using your model calculate how many tables a server would need to serve to make $1000 in a week.

   e. Use your model to determine how much money would a server make if he was only able to serve 105 tables in the week?

2. The graph below shows a line of best fit for data collected on the distance bicyclists in a race have remaining in relation to the amount of time they have been riding.

a. Write the equation for the line of best fit.



b. What does the value of the slope represent in the context of this problem?

c. What does the value of the y-intercept represent in the context of this problem?

d. Using your model calculate how many kilometers the cyclist has remaining if she has been riding for three hours and forty-five minutes.

e. Use your model to determine if the cyclist is 50 kilometers from the finish, how long has she been riding?

3. The two-way table below shows the number of students with each hair color and eye color.

		Hair Color				
		Black	Brown	Red	Blond	Total
Eye Color	Brown	7	12	3	1	23
	Blue	2	8	2	9	21
	Hazel	2	5	1	1	9
	Green	1	3	1	2	7
	Total	12	28	7	13	60

True or false? Provide data to support your claim.

a. Blonde students are more likely to have blue eyes than brown haired students.

b. Green eyed students are as likely to have brown hair as brown eyed students are to have red hair.

c. Students are four times as likely to have brown hair as they are to have red hair.

d. Blonde haired students are much more likely to have light eyes (blue, hazel, green) than red haired students.

e. Red haired students are less likely to have blue eyes than brown haired students.

5. The table to the right gives information about numbers of students who do and don't do chores and do and don't collect allowance.

	Allowance	No Allowance
Do Chores	13	3
Do Not Do Chores	5	4

Are students who do not collect allowance more likely to not do chores?

Is it more likely for a student who does not do chores to collect allowance than it is for a student who does chores to not get an allowance?

Solve for x.

$5x - 10 = 7x - 5$

$4x + 11 - 2x = 4 + 3x - 5$

$3x - 7 = 7 - (10x + 4)$

$3(2x - 5) - x = 4 - 7(x + 1)$

$\frac{4\,(3x - 2)}{5} = x - 4$