Warm Up

10/31

As a group …

Write out the directions you should follow if you are asked to graph:

$$y = -\frac{3}{5}x - 1$$

Use bullet points!

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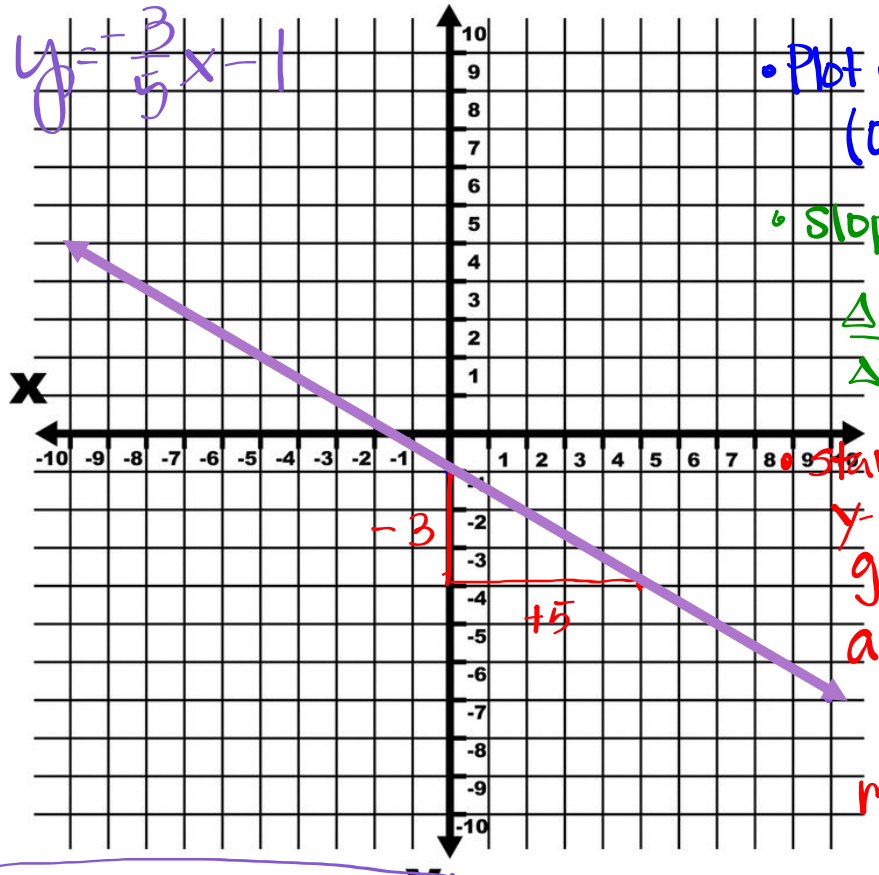
$y = -\frac{3}{5}x - 1$



- Plot y-intercept (0, -1)
- Slope is $\frac{\Delta y}{\Delta x}$

$\frac{\Delta y}{\Delta x} = \frac{-3}{5}$

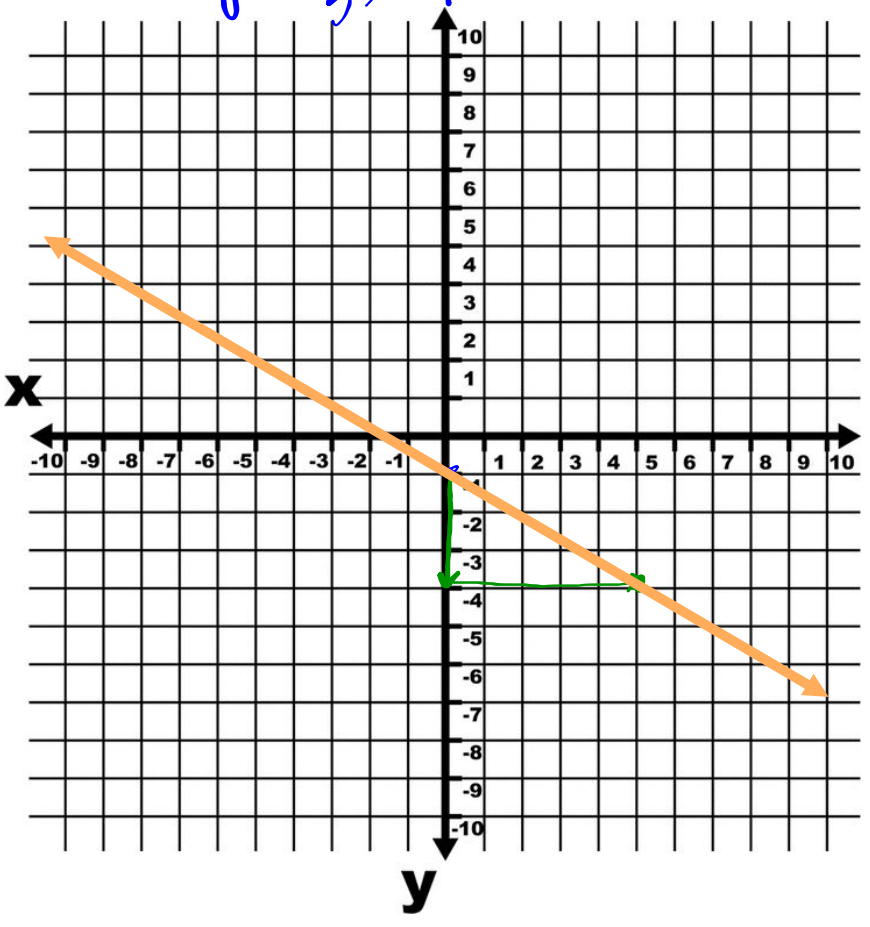
Starting at the y-int go down 3 and to the right 5 make a point

$-\frac{3}{5} = \frac{-3}{5} = \frac{3}{-5}$

All the same

- Draw a line THROUGH the points and put arrows at the ends

$y = -\frac{3}{5}x - 1$



- On the y-axis plot a point on -1
- Starting at -1 on the y-axis, go down 3 and to the right 5. Plot a point
- Using a ruler draw a line through both points and draw arrows on the ends.

Negative slopes:

$$-\frac{5}{2} = -\frac{5}{2} = \frac{5}{-2}$$

Problem 5.3

Use the information about the students to answer these questions.

	Late	On Time	
Job	12	8	20
No Job	15	25	40
			60

A Make a table to display the data on students and after-school jobs.

B Use your table from Question A. Do you think each statement is *true* or *false*? Justify your answers.

1. Students without after-school jobs are more likely to have late or missing homework than students with after-school jobs.
2. Students with after-school jobs are more likely to have late or missing homework than on-time homework.
3. Students without after-school jobs are three times as likely as students with after-school jobs to have on-time homework.
4. Students with after-school jobs are less likely to have on-time homework than students without after-school jobs.

40% ≠ 62%

$\frac{8}{20} = \frac{25}{40}$

C
1. The numbers of students with and without after-school jobs are not the same. Rewrite the data in your table as fractions and percents.
2. Do the fractions and percents in your table change your answers to Question B? Explain your reasoning.

D If someone claims that the data and analysis show that after-school jobs cause students to have late or unfinished homework, what alternate explanations would you offer? What do you think could be the cause of late or unfinished homework other than after-school jobs?

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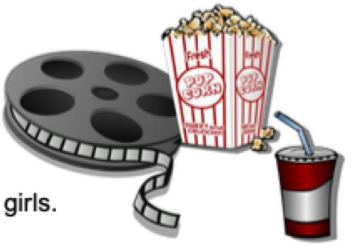
Two-Way Tables

Complete the two-way tables based on the information given and answer the corresponding questions. Round your answers to the nearest whole number or whole percent. **Show mathematical work if needed to support your answer.**

8th Graders Favorite Movie Genres

	Comedy	Action	Sci-Fi	Total
Boys	18	47-(14-18) 15	33-19=14	47
Girls			19	80-47=33
Total		21	33	80

True or False



1. Eight girls preferred comedy movies.
2. Fifteen boys preferred action movies.
3. Thirty-three percent of the students surveyed were girls.
4. Fifty-nine percent of the students surveyed were boys.
5. **Girls are as likely to prefer Sci-Fi as boys are to prefer Comedy.**

Favorite Classic Rock Bands among Millennials als

	Beatles	Rolling Stones	Doors	Total
Boys			9	34
Girls	15			
Total		25	18	60

Short Answer

6. How many more girls than boys prefer The Beatles?
7. What percent of the boys preferred The Beatles?
8. Which band did the boys prefer most?
9. **Are girls as likely as boys to prefer The Doors?**

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Mathville High School

	Algebra 1	Geometry	Algebra II	Total
9th Grade			20	
10th Grade		39		167
Total	120		48	282

10. How many students are taking Geometry?

11. Which math class has the least number of students?

12. Are there more students 9th grade or 10th grade students taking math classes?

13. What percent of students taking Algebra 1 were in the 9th grade?

Sophomores Foreign Language

	Latin	Spanish	Chinese	Total
Boys		78	20	120
Girls			22	
Total	60		42	238

14. How many students are taking Latin?

15. Which language class has the least number of students?

16. Are there more boys or girls taking foreign language classes?

17. What percentage of sophomores are taking Spanish?

Favorite Exotic Fruit

	Star Fruit	Plantains	Guava	Total
8th Grade	11		15	32
9th Grade		18		
Total	33			100

18. What percent of 8th graders choose guava?

19. What percent of students choose plantains?

20. Are 9th graders are more likely to choose Star Fruit than 8th graders?

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Girls are as likely to prefer Sci-Fi as boys are to prefer Comedy.

Are girls as likely as boys to prefer The Doors?

What percentage of sophomores are taking Spanish?

Are 9^{th} graders are more likely to choose Star Fruit than 8^{th} graders?

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Homework

Finish classwork