

**Use a diagram, table or graph to answer questions 1-3:**

- Ms. Carson plans to order pizza for a class party. She thinks that 4 pizzas will be enough for 10 people. She needs to order enough pizza for 40 people. How many pizzas should she order?
- The pizzas at Grande’s Pizza are really large. Ms. Carson thinks that 4 pizzas will be enough for 16 people. How many pizzas should she order for the 40 people at the class party?
- At Broadway Pizza, 4 small pizzas are enough for 5 people. At this rate, how many people will 6 pizzas feed?
- Two taxicab companies charge different rates for fares. Finish filling out the tables for each company. Explain how you got each amount of money for each table.

The Harmony Taxicab Company:

Distance in miles	1	2	3	4	6	9	15
Cost in Dollars	\$3.00	\$6.00	\$9.00	\$12.00	\$	\$	\$

The Eureka Taxicab Company:

Distance in miles	1	2	3	4	6	9	15
Cost in Dollars	\$3.50	\$5.50	\$7.50	\$9.50	\$	\$	\$

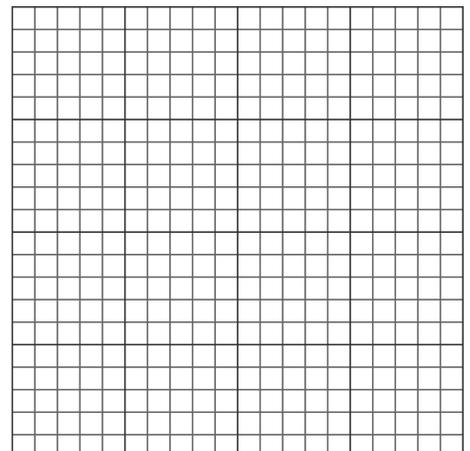
- How are the two companies similar in their charges?  
How are the two companies different in their charges?
- What is the rate per mile for each company (this is called the rate of change)?

7. Graph the costs for each company in two different colors.  
(no bar graphs)

The independent variable should go on the x-axis.

(Is Distance or Cost the independent variable?)  
Make sure to label the axes and include your scale for each axis.

8. How are the graphs alike? How are the graphs different?



9. Plant A is 18 inches tall after one week, 36 inches tall after two weeks, 57 inches tall after three weeks. Plant B is 18 inches tall after one week, 36 inches tall after two weeks, 54 inches tall after three weeks. Fill in the tables with the data. Can you predict how tall each plant will be after four weeks?

Show work to justify your answer.



10. An elevator ascends at a rate of 750 feet per minute. Fill in the table showing the height per minute.

Time (min)	1	2	3	4
Height (ft)				

11. What does it mean for something to be proportional?

Which of the above situations do you think are proportional?

12. For which Taxicab Company is the cost proportional to the miles? How do you know?

13. What is your conjecture for how to determine if a table of values represents a proportional relationship?

14. What is your conjecture for how to determine if a graph of values represents a proportional relationship?

15. Brayden ran laps around the gym. His times are shown in the table. Brayden is trying to decide whether the number of laps is proportional to the time. He claims it is proportional because the number of laps always increases by 2. Find his mistake and correct it.

Time (min)	1	2	3	4
Laps	4	6	8	10