

8.4 Comparing Proportions

MATH 7

Write your questions here!

Mr. Kelly and Mr. Sullivan are having a three point contest.
Who is the better 3 point shooter?

KELLY

Shots Attempted	Shots Made
3	2
6	4
15	10

SULLY

$$y = 0.7x$$

Each contestant gets 20 shots. Who wins the competition? By how much?

Write an equation from a table.

x	y
5	16
15	48
20	64

Is the relationship proportional?

If so, write the equation:

x	y
5	3
8	4.8
16	10

Is the relationship proportional?

If so, write the equation:

Compare Baking Companies

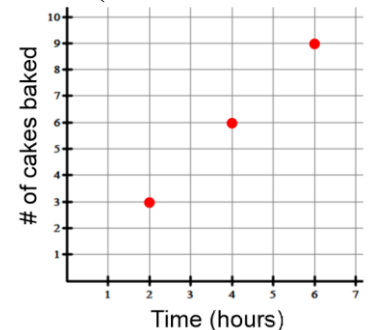
Sully Sweets

Makes 5 cakes every 3 hours

Kelly Confections

Time (hours)	Cakes (#)
2	3.5
8	14
12	21

BBG (Burst Baked Goods)



How long will it take each company to bake 30 cakes?

SUMMARY:

Now, summarize your notes here!

8.4 Comparing Proportions

PRACTICE

Determine if the tables are proportional. If they are proportional, write an equation.

1.

x	y
5	3
15	9
20	12
10	6

Is the relationship proportional?

If so, write the equation:

2.

x	y
0	3
2	11
6	27
3	15

Is relationship proportional?

If so, write the equation:

3.

x	0	12	6	24
y	0	4	2	8

Is relationship proportional?

If so, write the equation:

The following are proportional. Compare the relationships and answer the questions.

3. Rod and Tod are saving money over the summer.

ROD

Time (days)	Money Saved (\$)
2	9
4	18
6	27
8	36

Equation:

TOD

Todd saves \$20 every 5 days.

Equation:

a. Use a sentence to explain what k means in this context for each boy.

ROD:

TOD:

b. How much money will each boy have in 30 days? Use the equations.

ROD:

TOD:

c. How long will it take for each boy to save 200 dollars? Use the equations.

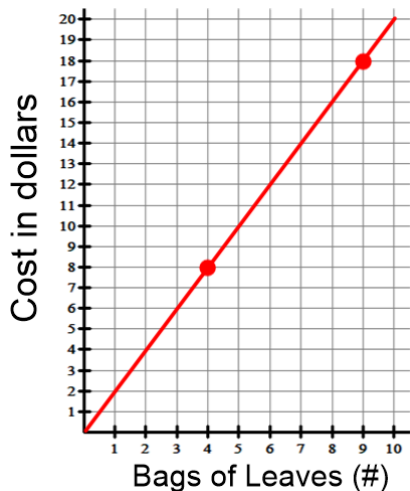
ROD:

TOD:

The following are proportional. Compare the relationships and answer the questions.

4. “Leaf it to Me” and “Leaf Baggers Inc “ are competing leaf raking companies.

Leaf it to Me



Equation:

Leaf Baggers Inc (LBI)

$$c = 2.5b$$

Where c is the cost and b is # of bags of leaves raked.

- a. Which company is cheaper? Justify your solution.
- b. Some people say these companies are RAKING in the cash. What would each company charge for raking 14 bags of leaves? Use your equations.

Leaf it to Me:

LBI:

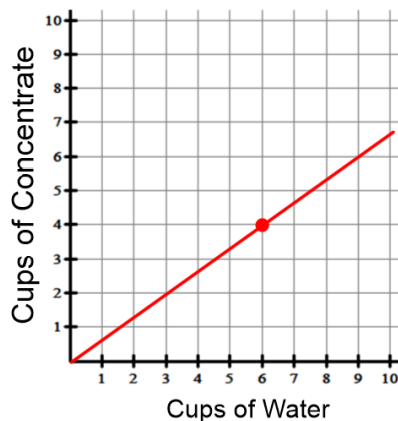
5. “Crusty Lemonade” and “Main Squeeze“ are competing lemonade recipes.

Crusty Lemonade

Water (cups)	Concentrate (cups)
8	2
10	2.5
12	3
14	3.5

Equation:

Main Squeeze



Equation:

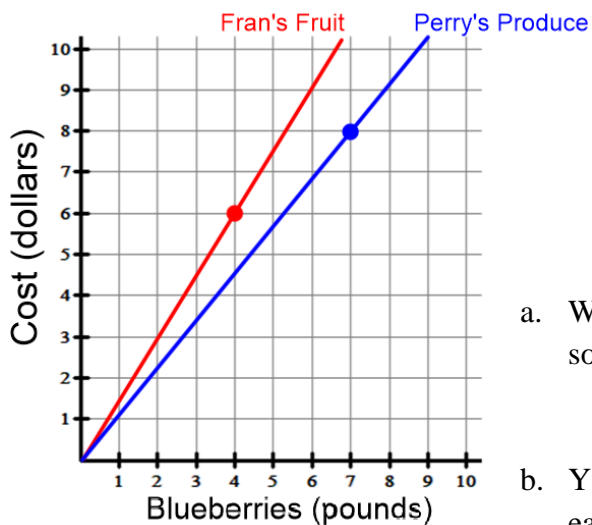
- a. How much water would you need to make lemonade for each recipe if you use 8 cups of concentrate? Use your equations.

Crusty Lemonade:

Main Squeeze:

Use the graph to write equations for each fruit stand. Answer the questions

7.



Fran's Fruit

Equation:

Perry's Produce

Equation:

- a. Which fruit stand sells blueberries at a cheaper price? Justify your solution.
- b. You have \$20 to buy blueberries. How many pounds could you get at each produce stand? Use your equations.

Fran's Fruit:

Perry's Produce:

Fill in all missing representations. Graph both Spongebob and Patrick on the same graph.

8.

Spongebob

Verbal:

Spongebob runs 5 meters every 4 seconds.

Equation:

Table:

Time (seconds)	Distance (meters)
0	
4	
8	

Is the relationship proportional?

YES or NO

Patrick

Verbal:

Equation:

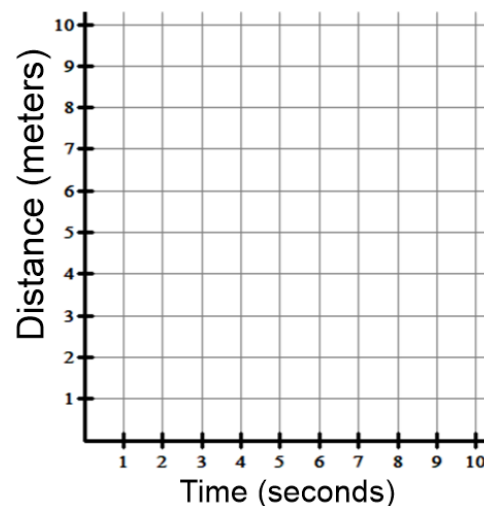
$$d = \frac{1}{2}t + 4$$

Time (seconds)	Distance (meters)
0	
4	
8	

Is the relationship proportional?

YES or NO

GRAPH:



- c. If the race is 100 meters long, who wins the race? How much do they win by?

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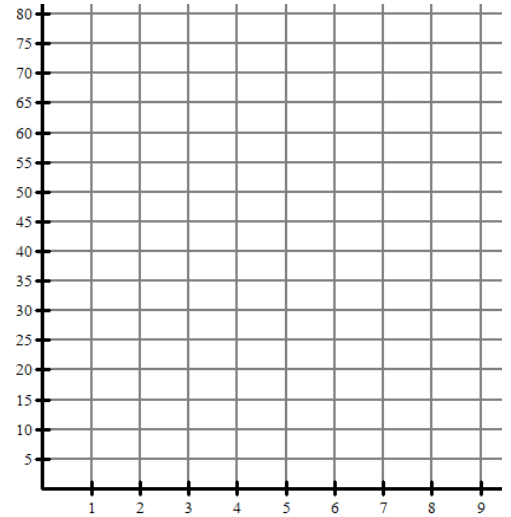
1. You don't feel like walking around the mall and decide to rent a Segway. Check out the rental companies.

Segway-R-Us: 8 dollars per hour

Get Ur Seg On: 6 dollars per hour

Fill in the table and graph companies! Label your graph!!!

Time Rented (hours)	Segway-R-Us Cost (\$)	Get Ur Seg On Cost (\$)
0		
1		
2		
3		
4		
10		



- a. Are both companies proportional? Explain why or why not?
- b. Write an equation for each company. Then use your equation to answer 3 and 4.
- Segway-R-Us Equation Get Ur Seg On Equation
- c. You have 80 dollars to spend on Segway. How many hours can you rent a Segway from each company?
- Segway-R-Us Get Ur Seg On
- d. You will be at the mall 4.5 hours. How much would a Segway cost from each company?
- Segway-R-Us Get Ur Seg On