Name:	Date:

3.5 Activity: Keeping It Real: Rates and Proportional Relationships

Welcome to the Real World... You're a Professional PERSONAL SHOPPER!

Congratulations! You've scored a job as the personal shopper for the top celebrity stylist in Los Angeles. On your first day, you are responsible for watching trends and sales to buy the newest styles at the best prices. You are in luck when you realize your amazing 7th-grade math teacher(s) taught you how to do this! If you save your client enough money, while making sure they are the best dressed, you are told you will have an interview published in Style magazine and posted online. This is your chance to make it big! Solve the following scenarios to navigate your way through your first day at your new job.

Directions: Answer the questions below. Be sure to *show your work and include your units.*

Find the Unit Rate: In preparation for an upcoming movie premiere you purchase the following items. Find the unit rate for each item. The first one has been done for you as an example!

1. **6 pairs of Jimmy Choo shoes for $236**

$$\frac{\$236}{\text{6 pairs of shoes}} = \$39.33/\text{pair}$$

2. You spend 240 minutes and meet with 9 clients. How many minutes do you spend with each client?

3. 12 Cartier bracelets for $1680.36. Find the cost per bracelet.

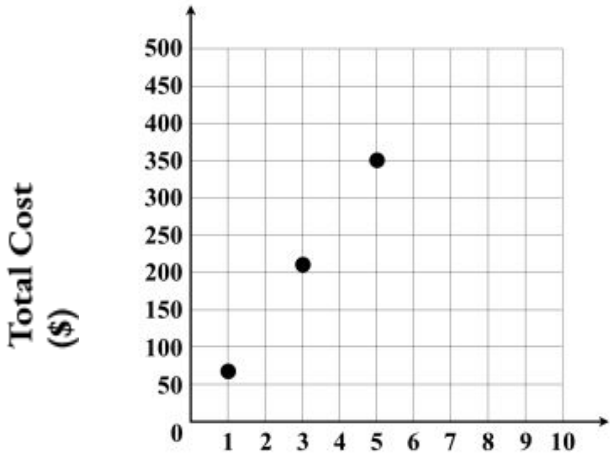
4. Which is the better springtime deal:
   - ★ 2 Chanel floral blouses for $68.50
   - ★ 3 groundbreaking Gucci t-shirts for $92.00

5. Which is the better deal:
   - ★ 14 Kylie Lip Kits for $420
   - ★ 11 KKW beauty palettes for $480

6. You see 15 clients in a week and work a total of 60 hours. You make $1000. How much do you earn per hour?

Circle the emoji that describes how you felt when solving the problems in this section.

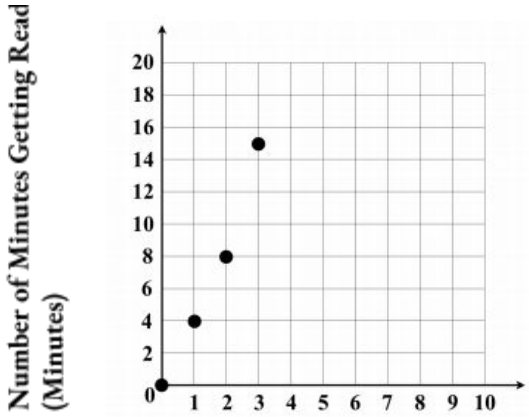
Identify the Proportional Relationships:



# of Sunglasses

This graph is demonstrating the total cost per number of Ray-Ban sunglasses.

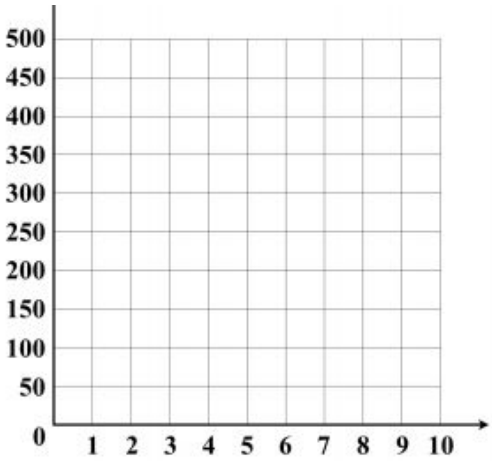
1. From the graph to the left, is this a proportional relationship? State your answer and explain how you know.



# of Celebrities

This graph is demonstrating the total number of minutes spent getting ready and the number of celebrities getting ready.

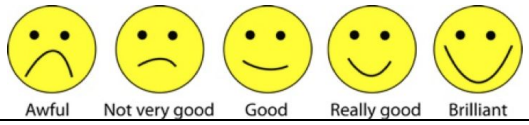
2. From the graph to the left, is this a proportional relationship? State your answer and explain how you know.



3. Label the axes on the graph to the left, and plot the points from the table below. Then, determine whether or not this relationship is proportional.

Number of Tuxedos	Cost ($)
2	190
3	285
5	475

Circle the emoji that describes how you felt when solving the problems in this section.



Find the Constant of Proportionality: The following table compares the cost of different numbers of items.

Cost ($)	Number of Chanel Bags
0	0
$1,632	2
$4,896	6
$11,424	14

1A. What is the constant of proportionality?

1B. Using the constant of proportionality from 2A, write an equation that represents this situation. Define your variables.

Time Spent Planning (Minutes)	# of Outfits Created
60	5
84	7
156	13
180	15

2A. What is the constant of proportionality?

2B. Using the constant of proportionality from 2B, write an equation that represents this situation. Define your variables

Circle the emoji that describes how you felt when solving the problems in this section.

Identifying Proportional Relationships in the Real World:	
Every year, you have to shop for several celebrities during awards season, as they prepare for events like the Oscars, the Grammys, the Golden Globes, etc. Last year, you had many clients. In 2015, you paid **$3,600** for **18** outfits for your clients. In 2016, you paid **$4,800** for **24** outfits for your clients. In 2017, you had gotten a huge boost in business from your Instagram page. You paid **$10,000** for **50** outfits for your clients.	a. Is the price you pay proportional to the number outfits that you pull together? Show your work and explain in words how you arrived at your answer.
	b. Identify the constant of proportionality, or k.
	c. Using the value of k you found above, write an equation to represent this scenario.
	d. What would you pay for **120** outfits to pull together?
	e. How many outfits would you have put together if you paid $1,800?

Circle the emoji that describes how you felt when solving the problems in this section.