

# 8.3 Proportional Representations

# NOTES

## MATH 7

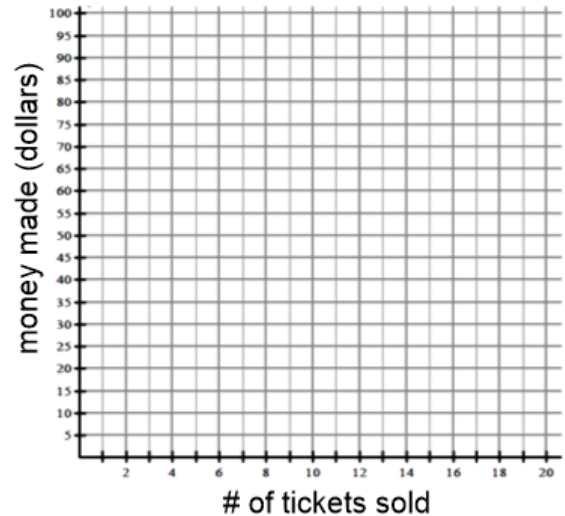
Write your questions here!

The middle school is selling tickets to the school dance. The equation shows how much money they make where  $t$  is the # of tickets sold and  $m$  is the money made.

Tickets Sold (#)	Money Made (\$)
2	
30	
	50
	75

### EQUATION

$$m = 5t$$

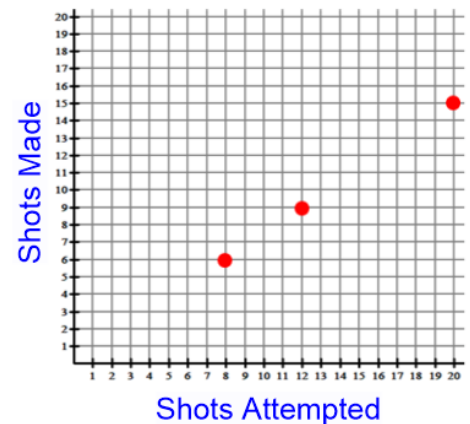


- How much money would they make if they sell 45 tickets?
- How many tickets do they need to sell in order to make \$64?

### Verbal:

Shots Attempted	Shots Made
12	
9	
	18
	20

What does the point (8,6) mean?



### Table

$x$	$y$
0	
8	
	3

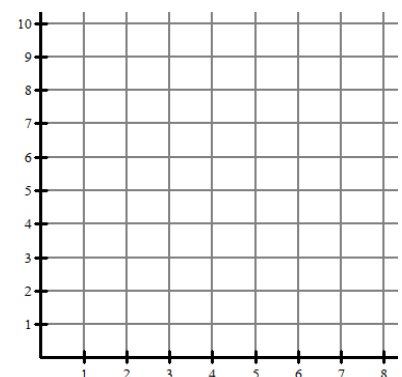
### Equation

$$y = \frac{1}{4}x + 2$$

Is the equation proportional?

YES or No

### Graph



### SUMMARY:

Now, summarize your notes here!

## 8.3 Proportional Representations

# PRACTICE

The following are proportional. Fill in the missing table, equation, and/or graph. Then answer the questions.

1. **Verbal:** Mr Kelly makes 3 dollars every 2 minutes tutoring math.

**Table**

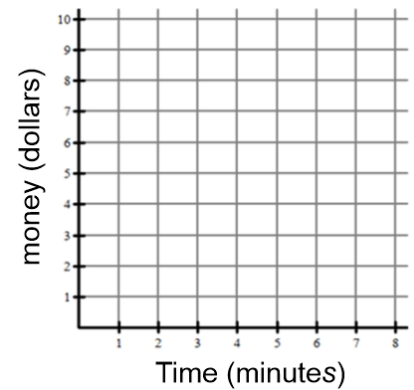
Time (minutes)	Money (\$)
0	
4	
	3
	12

**Equation**

$$k =$$

Write the equation.

**Graph**



- Use a sentence to explain what  $k$  means in this context.
- How much money will Mr. Kelly make in 60 minutes? Use your equation.
- How long will it take for Mr. Kelly to earn 100 dollars? Use your equation.

2. **Verbal:** Mr. Brust is trying to win a stuffed animal by playing the Claw game. He spends \_\_\_\_\_ per game.

**Table**

Games Played (#)	Money Spent (\$)
2	
15	
	9
	3

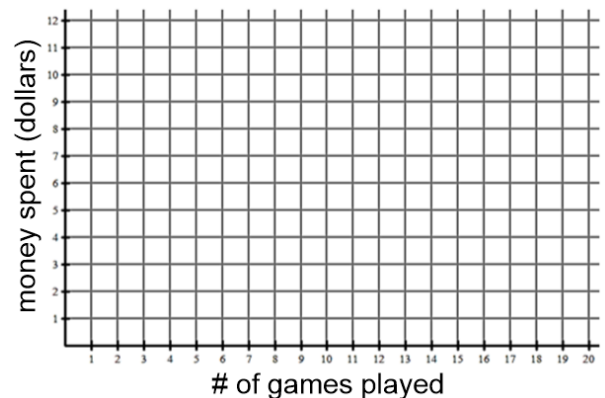
**Equation**

$$k =$$

Given the equation.

$$m = 0.5g$$

**Graph**



- Use a sentence to explain what  $k$  means in this context.
- How many games did Mr. Brust play if he spent \$10 on the Claw game? Use the equation.
- How much will 40 games of the Claw cost? Use the equation.

The following are proportional. Fill in the missing table, equation, and/or graph. Then answer the questions.

3. **Verbal:** The ratio of concentrate to water in “Ain’t Ur Granny’s Lemonade” is \_\_\_\_\_ cups to \_\_\_\_\_ cups.

**Table**

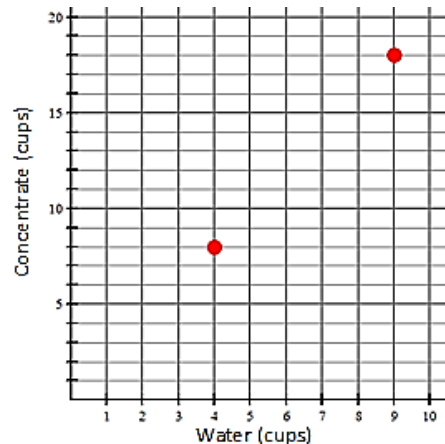
Water (cups)	Concentrate (cups)
4	
1	
	12

**Equation**

$$k =$$

Write the equation.

**Graph**



- Use a sentence to explain the meaning of the point (4,8).
- How many cups of water do you need to make the lemonade if you have 6 cups of concentrate?
- How many cups of concentrate do you need to make the lemonade if you have 40 cups of water?

Use the equation to fill in the table, answer the question, and graph.

4.

**Table**

$x$	$y$
0	
2	
6	
	15

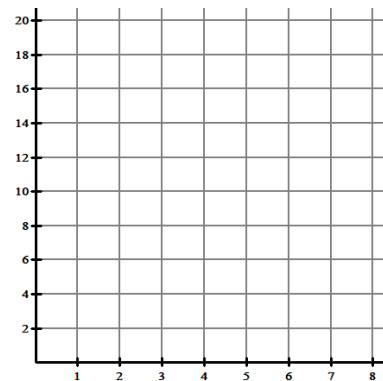
**Equation**

$$y = 3x$$

Is the equation proportional?

YES or No

**Graph**



5.

**Table**

$x$	$y$
0	
2	
4	
	4

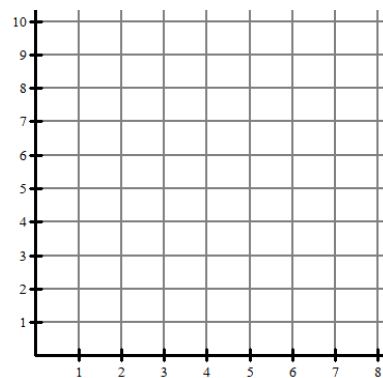
**Equation**

$$y = \frac{1}{2}x$$

Is the equation proportional?

YES or No

**Graph**



Use the equation to fill in the table, answer the question, and graph.

6.

Table

$x$	$y$
0	
2	
	6
	0

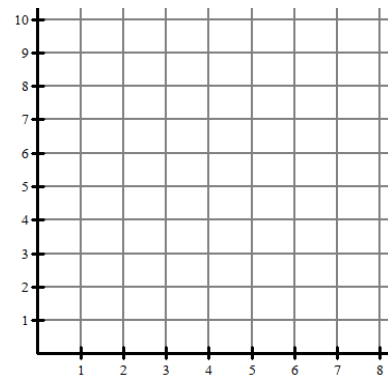
Equation

$$y = -2x + 8$$

Is the equation proportional?

YES or No

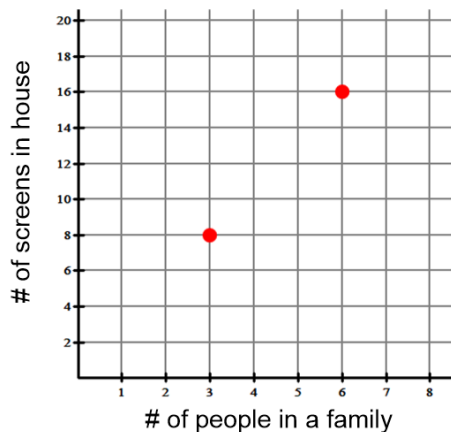
Graph



## 8.3 Proportional Representations

## WRAP UP

1. The graph is proportional. Write the equation.



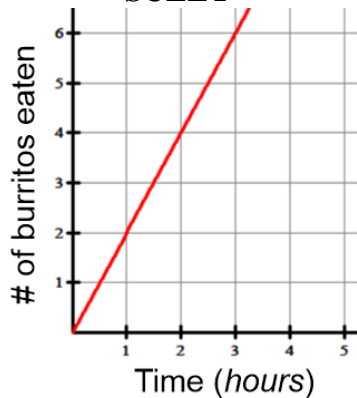
2. Answer the following question about the graph from #1.

- Explain the meaning of the point (6,16).
- How many screens would be in a house with 5 people?

### EXIT TICKET –

Who eats Taco Bell faster? Sully, Kelly, or Brust? Explain why.

SULLY



$k =$

KELLY

Time (hours)	Burritos (#)
2	3
4	6
6	9

$k =$

BRUST

$$b = \frac{5}{3}t$$

Where  $b$  is the # of burritos eaten and  $t$  is time in hours.

$k =$