Unit: Proportional Relationships
Student Handout 3

Name _____

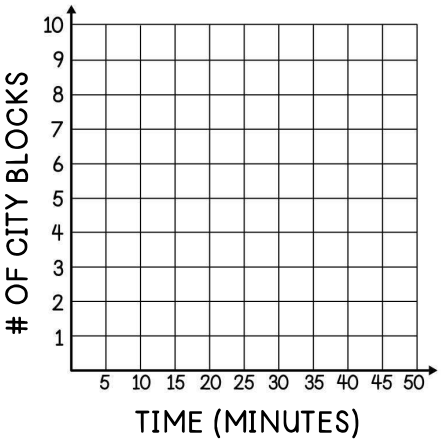
Date _____Pd_____

PROPORTIONAL RELATIONSHIPS: GRAPHS

Isabelle walks to work each morning. It takes her 5 minutes to travel one city block. Use this information to complete a-b.

a. Sketch a graph to show the number of blocks Isabelle can travel in a specific amount of time.

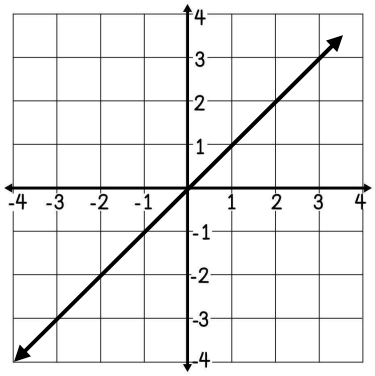
b. What features of the graph help you to determine if the relationship is proportional?



PROPORTIONAL GRAPHS

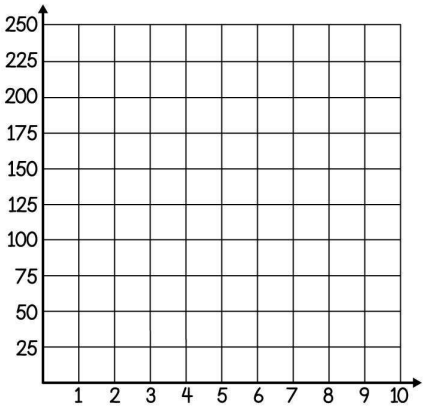
- The line always passes through the origin, _____.
- The rate of change will be equal to the _____ of proportionality, k.
- The equation of the line will be _____.

Ex. Use the formula $k = \frac{y}{x}$ to determine the rate of change.



For 1-2, complete the graph, find the rate of change, and write the equation for each situation.

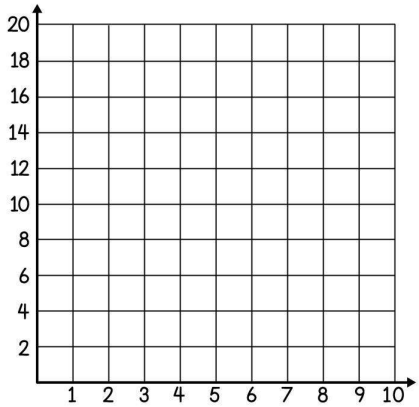
1. An ATV travels 25 miles each hour, where x is the number of hours and y is the total miles.



rate of change: _____

equation: _____

2. The number of cars, x, is proportional to the number of wheels, y.



rate of change: _____

equation: _____

3. Sandra plots the points (0, 0) and (5, 10) on a graph to represent a proportional relationship.

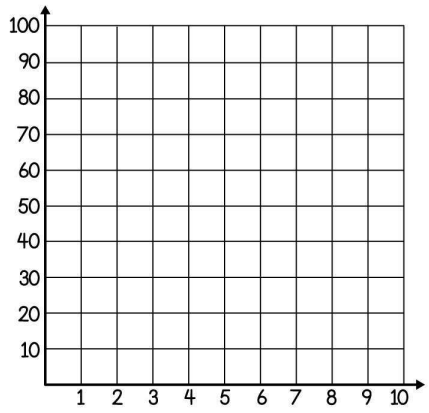
a. Find the rate of change.

b. Write an equation to represent the relationship.

In 4-7, use your knowledge of proportional relationships to answer each question.

4. Use the information in the table to complete the graph and answer the questions.

# OF BOXES	2	3	5	7
# OF BANDAGES	24	36	60	84



rate of change: _____

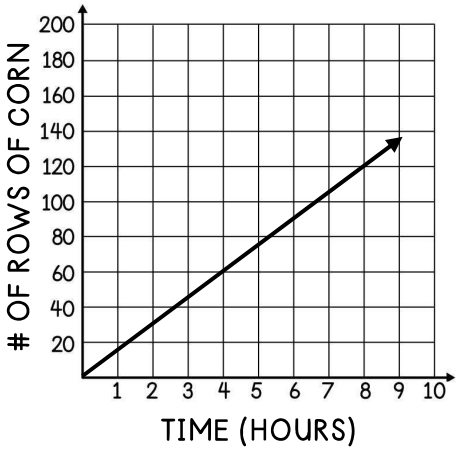
equation: _____

5. A farmer is plowing his cornfields. The relationship between x, the hours driving the plow, and y, the number of rows of corn plowed, is shown in the graph at the right.

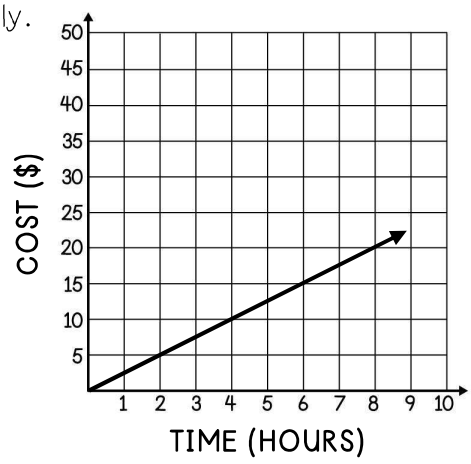
a. What does the point (0, 0) represent?

b. Choose an ordered pair to find the constant of proportionality.

c. Write an equation to represent the situation.



6. Patricia is asked to determine if the statements below represent the graph. Check all that apply.



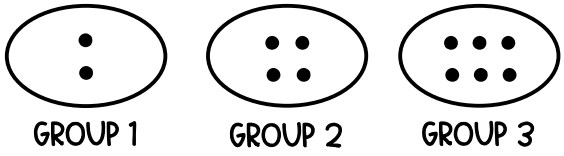
The equation y = 2.5x represents the situation.

The cost for 10 hours of parking is $4.

The cost of parking for 8 hours is $20.

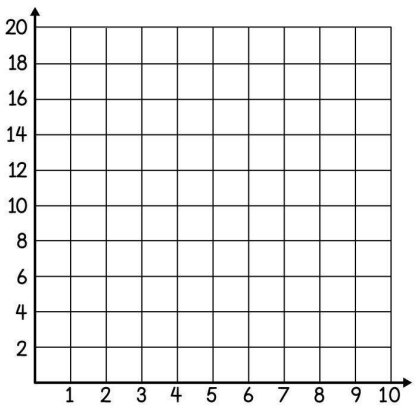
The graph will contain the coordinate (12, 30).

7. A representation of a proportional relationship is shown below.



a. Sketch a graph to represent the relationship between the group number, x, and the number of counters, y.

b. Write an equation to represent the relationship between the group number, x, and the number of counters, y.



Unit: Proportional Relationships
Homework 3

Name _____

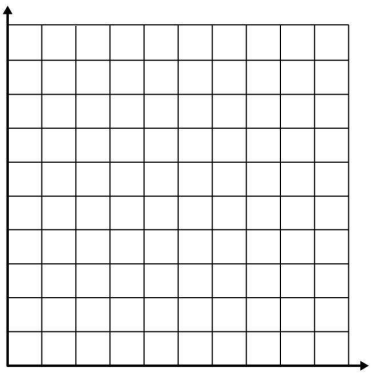
Date _____Pd_____

PROPORTIONAL RELATIONSHIPS: GRAPHS

Use your understanding of proportional relationships to answer the questions below.

DeMarcus is organizing a group of friends to attend a concert. The ticket pricing is shown in the table below. Use the information to create a graph and answer the questions.

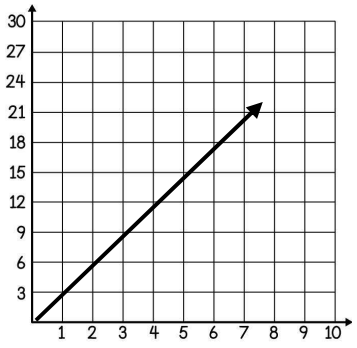
# OF TICKETS	2	3	5	7
TOTAL COST ($)	32	48	80	112



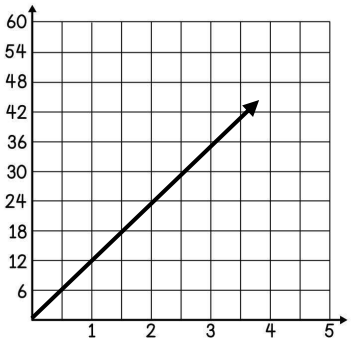
1. Rate of Change: _____ Equation: _____
2. What does the ordered pair (1, 16) represent in this situation?
3. Describe how you know that this is a proportional relationship:

4. The number of feet in a yard can be represented by a graph. Circle the graph(s) that could be used to represent the number of feet, y, in x yards.

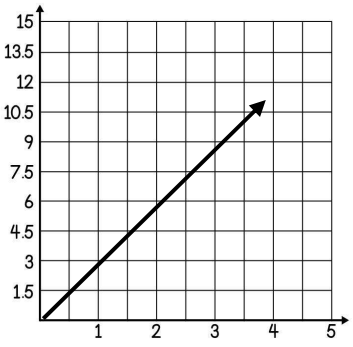
GRAPH A



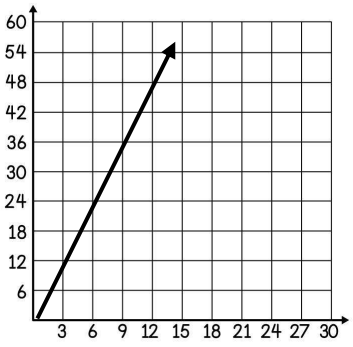
GRAPH B



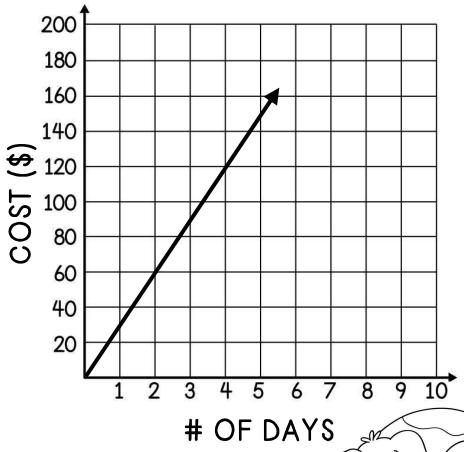
GRAPH C



GRAPH D



A dog kennel charges a daily boarding rate as shown on the graph. Use the information to mark 5-8 as true or false. If false, rewrite the statement correctly.



_____ 5. The dog kennel charges $60 per day.

_____ 6. The equation y = 30x can represent the graph.

_____ 7. It costs $200 to board a dog for 7 days.

_____ 8. The graph will contain the coordinate (9, 270).