

Name _____ Date _____

Lesson 10: Apply

Jet Ski Rentals

Adriana has an opportunity to go jet skiing on Canandaigua Lake for the 4th of July. She looked up the prices to rent a jet ski for the long weekend. Below is the information Adriana gathered from two different Jet Ski Rental companies: Canandaigua Jets and the Jackson Jet Ski company. You are going to explore what might be the properties of a proportional relationship and what might be the properties of a non-proportional relationship, Use the data tables below to help you answer some questions.

A. USING TABLES TO DETERMINE PROPORTIONALITY

Calculate the ratio of $\frac{y}{x}$ in each data table. Then answer the questions below.

Canandaigua Jets

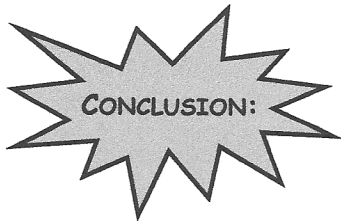
| NUMBER OF HOURS | TOTAL COST (\$) | RATIO: $\frac{y}{x}$ |
|-----------------|-----------------|----------------------|
| 1 | \$45 | |
| 2 | \$90 | |
| 3 | \$135 | |
| 4 | \$180 | |
| 5 | \$225 | |
| x | | y |

Jackson Jet Ski Company

| NUMBER OF HOURS | TOTAL COST (\$) | RATIO: $\frac{y}{x}$ |
|-----------------|-----------------|----------------------|
| 1 | \$75 | |
| 2 | \$120 | |
| 3 | \$165 | |
| 4 | \$210 | |
| 5 | \$255 | |
| x | $45x + 30$ | y |

Fill in the equations for this table.

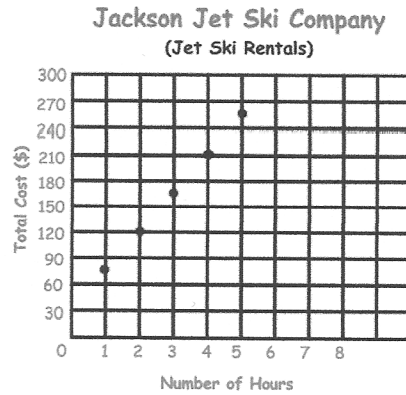
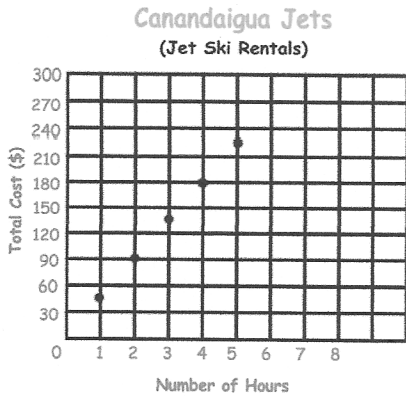
- 1] How are the tables alike? _____
- 2] How are they different? _____
- 3] Which one is proportional? _____
- 4] What makes it a proportional relationship? _____



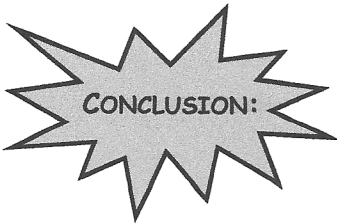
To determine proportionality from a table you

B. USING GRAPHS TO DETERMINE PROPORTIONALITY

Look at the graphs of Canandaigua Jet Ski Company and Jackson Jet Ski Company. Make observations of each graph and answer the questions below.



- 1] How are the graphs alike?
- 2] How are they different?
- 3] Which one is proportional?
- 4] What makes it a proportional relationship?



To determine proportionality from a graph,

C. USING EQUATIONS TO DETERMINE PROPORTIONALITY

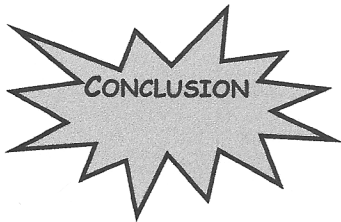
Activity 1:

$$y = 45x$$

Activity 2:

$$y = 45x + 30$$

- 1] How are the equations alike?
- 2] How are they different?
- 3] Which one is proportional?
- 4] What makes it a proportional relationship?



To determine proportionality from an equation,

Name _____ Date _____

Lesson 10: Homework

Determine which of the following equations represent proportional relationships. Explain why each equation is a proportional relationship or why each equation is not a proportional relationship.

a) $y = 5 + 2x$

b) $y = -\frac{1}{2}x$

c) $y = 5x$

d) $y = -6x - 1$