

**Directions:** Complete the following SOLVE problem with your teacher. You will only complete the S step.

Jessica's school is selling candles to raise money for a class trip. The graph shows the amount of money Jessica makes based on the number of candles she sells. What is the unit rate?



**Directions:** Complete this page with your teacher and partner.

Look at the table below. What is the unit rate?

Floral Arrangements	1	2	3	4
Roses	6	12	18	24

**Directions:** Complete this page with your teacher and partner.

We can also tell if two quantities form a proportional relationship by looking at a graph of the two quantities.

Floral Arrangements	1	2	3	4
Roses	6	12	18	24

**1.** What value will be plotted on the *x*-axis? \_\_\_\_\_\_ This will be known as the \_\_\_\_\_\_. Explain why.

- **2.** What value will be plotted on the *y*-axis? \_\_\_\_\_ This will be known as the \_\_\_\_\_. Explain why.
- **3.** List the ordered pairs from the table above.

Graph the information from the table on the coordinate plane.

- **4.** After plotting the points and connecting them, what do you notice about the graph?
- **5.** How many roses would be needed if zero floral arrangements were made?



- **6.** Add a point for the number of roses for zero arrangements. Does it change the line in the graph?
- **7.** What do you notice about the constant, proportional relationship in terms of the roses (*y*) and floral arrangements (*x*)?



**Directions:** Complete this page with your teacher and partner.

- 8. What does the point (0, 0) mean?
- 9. What does the point (1, 6) mean?
- 10. A unit rate is defined as \_\_\_\_\_
- 11. What is the unit rate in the table?
- 12. What is the coordinate pair that has the independent variable of 1?
- **13.** What do you notice about the coordinate pair (1, y) and the unit rate?
- 14. What does the point (2, 12) mean?
- **15.** The point (3, 18) means that there are \_\_\_\_ roses in \_\_\_\_ arrangements, and the point (4, 24) means that there are \_\_\_\_\_ roses in \_\_\_\_ arrangements.

**Directions:** Complete this page with your partner.

The table shows the number of miles a boat has traveled in a certain number of hours.

Hours	1	2	4	7
Miles	45	90	180	315

- 1. What value will be plotted on the *x*-axis? \_\_\_\_\_ This will be known as the \_\_\_\_\_. Explain why. \_\_\_\_\_
- **2.** What value will be plotted on the *y*-axis? \_\_\_\_\_ This will be known as the \_\_\_\_\_. Explain why. \_\_\_\_\_
- **3.** List the ordered pairs from the table above.

Graph the information from the table on the coordinate plane.

- **4.** After plotting the points and connecting them, what do you notice about the graph?
- **5.** How many miles would be traveled in zero hours?
- **6.** Add a point for the number of miles for zero hours. Does it change the line in the graph?



**7.** What do you notice about the constant, proportional relationship in terms of the miles (*y*) and hours (*x*)?



**Directions:** Complete this page with your teacher and partner.

8. What does the point (0, 0) mean?

9. What does the point (1, 45) mean?

- 10. A unit rate is defined as \_\_\_\_\_
- 11. What is the unit rate in the table?
- **12.** What is the coordinate pair that has the independent variable as 1?
- **13.** What do you notice about the coordinate pair (1, y) and the unit rate?
- 14. What does the point (2, 90) mean?
- **15.** The point (4, 180) means that you will travel \_\_\_\_\_ miles in \_\_\_ hours, and the point (7, 315) means that you will travel \_\_\_\_\_ miles in \_\_\_ hours.

**Directions:** Complete this page with your teacher and partner.

Let's look at another relationship to see if graphs of proportional relationships always go through the origin and form a straight line.

The table shows the cost of a gym membership at the local fitness center. There is a monthly fee of \$12.00 for unlimited use of the machines. If you want to take fitness classes, there is a cost per class.

Classes per month	1	2	3	6
Cost per month	\$17	\$22	\$25	\$31
1. What value will be plotted on the x-axis?				This will be
<ol> <li>What value will b known as the</li> </ol>	e plotted on th	ne y-axis? Expl	ain why	This will be

**3.** List the ordered pairs from the table above.

Graph the information from the table on the coordinate plane.

- **4.** After plotting the points and connecting them, what do you notice about the graph?
- 5. What is the monthly cost for a member who takes no classes? \_\_\_\_\_ Write the ordered pair. \_\_\_\_\_
- **6.** Add a point for the cost per month with no classes. Does the line extend through the Origin 0 origin?



- 7. Is this relationship displayed on the graph proportional? \_\_\_\_. Why?
- **8.** What do you notice about the constant proportional relationship in terms of the cost per month (y) and number of classes (x)?

**Directions:** Complete this page with your partner.

The table below shows the cost for renting DVDs through an online club. There is a monthly fee of \$10.00 no matter how many DVDs you rent.

DVDs	1	2	3	6
Cost per month	\$13.00	\$15.00	\$16.00	\$19.00

1. What value will be plotted on the *x*-axis? \_\_\_\_\_\_ This will be known as the \_\_\_\_\_\_. Explain why. \_\_\_\_\_\_

2. What value will be plotted on the *y*-axis? \_\_\_\_\_\_ This will be known as the \_\_\_\_\_\_ variable. Explain why. \_\_\_\_\_\_

**3.** List the ordered pairs from the table above.

Graph the information from the table on the coordinate plane.

- **4.** After plotting the points and connecting them, what do you notice about the graph?
- 5. What is the monthly cost for a member who rents no DVDs? \_\_\_\_\_ Write the ordered pair. \_\_\_\_\_
- 6. Add a point for the cost per month with no classes. Does the line extend through the Origin 0 origin?



- **7.** Is this relationship displayed on the graph proportional? \_\_\_\_\_ Why?
- **8.** What do you notice about the constant proportional relationship in terms of the cost per month (y) and number of DVDs (x)?

**Directions:** Complete this page with your partner.

Identify if the graph is proportional. Explain why or why not. If the graph is proportional, identify the unit rate.





**3.** Graph the relationship shown in the table below.

Centimeters	5	7	8	11
Number of Beads	15	21	24	33



- 4. What does the point (8, 24) mean?
- 5. How is the unit rate represented in the graph?
- **6.** Does this graph represent a proportional relationship? \_\_\_\_\_ Explain why or why not.

Directions: Complete the following SOLVE problem with your teacher.



**Directions:** Complete the following problems using what you have learned about proportional relationships in graphs.

- Bill works at a used car dealership. He makes \$500 a week and \$500 for each car he sells. Is it a proportional relationship?
- 2. Helen is making dresses to sell. Each dress takes a certain amount of fabric. Is there a proportional relationship between dresses and yards of fabric?



**3.** The table shows the number of miles a car has traveled in a certain number of hours. Graph the information.

Hours	2	3	4	6
Miles	120	180	240	360



- 4. What does the point (4, 240) represent?
- 5. What is the unit rate? How do you know?



x

10 12

Origin 0

4 6 8

Minutes

2

**7.** Write any coordinate pair from the graph. Explain what it represents.

**S80** 

