

# Understand the Slope-Intercept Equation for a Line

Name: \_\_\_\_\_

**Prerequisite:** How can you represent and interpret proportional relationships?



**Study the example problem showing how to represent and interpret a proportional relationship. Then solve problems 1–5.**

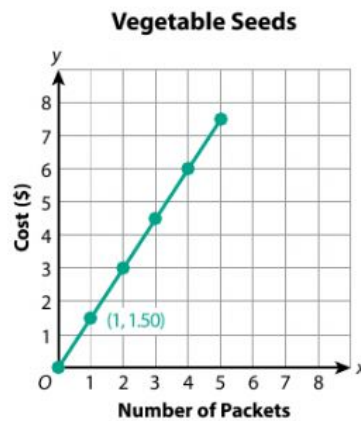
## Example

The table shows the costs for 2, 3, 4, and 5 vegetable seed packets. What is the unit rate?

| Vegetable Seeds   |      |      |      |      |
|-------------------|------|------|------|------|
| Number of Packets | 2    | 3    | 4    | 5    |
| Cost (\$)         | 3.00 | 4.50 | 6.00 | 7.50 |

Use the data to make a graph. Find the cost of 1 seed packet.

The unit rate is the cost in dollars for 1 packet. The graph shows that the unit rate is 1.50.



- 1** How you can use the table to find the unit rate in the example problem?

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- 2** What is the constant of proportionality in the example? What is the slope of the graph? What do they represent in the context of this problem? How do the constant of proportionality and slope relate to the unit rate?

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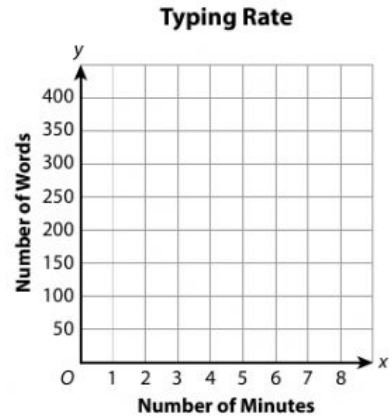


**Solve.**

- 3 The table shows how many words Julian can type if he types at a steady rate. Use the information in the table to make a graph. Find the slope of the graph and explain what it means in this situation.

| Typing Rate       |    |     |     |     |
|-------------------|----|-----|-----|-----|
| Number of Minutes | 2  | 4   | 6   | 8   |
| Number of Words   | 80 | 160 | 240 | 320 |

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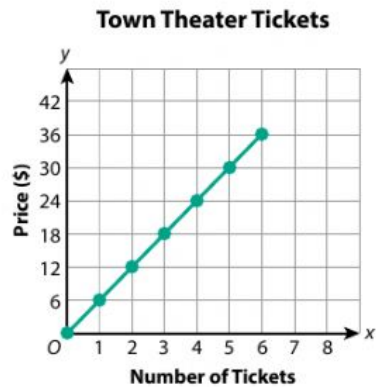


- 4 The price for movie tickets at Town Theater is shown in the graph. The price of 5 movie tickets at Center Theater is \$3.75 greater than the price of 5 movie tickets at Town Theater. What is the price per ticket at each theater?

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- 5 A hardware store buys 300 feet of nylon rope. The store sells the rope by the inch. A customer can purchase 40 inches of the rope for \$1.60. The store sells all of the rope and makes a profit of \$54. How much did the store pay for the rope in dollars per inch?

**Show your work.**



**Solution:** \_\_\_\_\_