

Tear out pages 169 - 184 from your textbook.

Put the pages in your 3-ring binder.

Return your book.

Work on page 170.

### Student Sign-out Log

name: first last

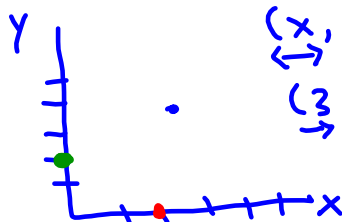
Date	First/Last Name	Destination	Time Out	Time Return
		RR Office Locker <u>Classrm</u>		

Oct 28-9:22 PM

## LESSON 7.1 Ratios, Rates, Tables, and Graphs



Make tables of equivalent ratios, find missing values in the tables, and plot the pairs of values on a coordinate plane.



$(x, y)$   
 $(3, 1)$   
 $(0, 2)$   
 $(2, 0)$

$$\frac{6}{8} = \frac{24}{32}$$

$\times 4$

$$\frac{20}{36} = \frac{10}{18}$$

$\div 2$

Oct 28-9:25 PM

Students in Mr. Webster's science classes are doing an experiment that requires 250 milliliters of distilled water for every 5 milliliters of ammonia. The table shows the amount of distilled water needed for various amounts of ammonia.

pg.173

Ammonia (mL)	2	3	3.5	4	5
Distilled water (mL)	100	150	175	200	250

**A** Use the numbers in the first column of the table to write a ratio of distilled water to ammonia.  $\frac{100}{2}$  Rate

**B** How much distilled water is used for 1 milliliter of ammonia? 50 mL

Use your answer to write another ratio of distilled water to ammonia.

$\frac{50}{1}$  unit Rate

**C** The ratios in **A** and **B** are equivalent/not equivalent.

**D** How can you use your answer to **B** to find the amount of distilled water to add to a given amount of ammonia?

Sample answer: Multiply the amount of ammonia by  $\frac{50}{1}$ , or 50.

**E** Complete the table. What are the equivalent ratios shown in the table?

$$\frac{100}{2} = \frac{150}{3} = \frac{175}{3.5} = \frac{200}{4} = \frac{250}{5}$$

Reflect

Oct 28-9:30 PM

Ammonia (mL) $x$	2	3	3.5	4	5
Distilled water (mL) $y$	100	150	175	200	250

pg.174

**B** Write the information in the table as ordered pairs. Use the amount of ammonia as the x-coordinates and the amount of distilled water as the y-coordinates.

(2, 100), (3, 150), (3.5, 175), (4, 200), (5, 250)

Graph the ordered pairs. Because fractions and decimals can represent amounts of chemicals, connect the points.

Describe your graph. Straight line

**C** For each ordered pair that you graphed, write the ratio of the y-coordinate to the x-coordinate.

$$\frac{y}{x} \quad \frac{100}{2}, \frac{150}{3}, \frac{175}{3.5}, \frac{200}{4}, \frac{250}{5}$$

**D** The ratio of distilled water to ammonia is  $\frac{50}{1}$ . How are the ratios in

**C** related to this ratio? equivalent

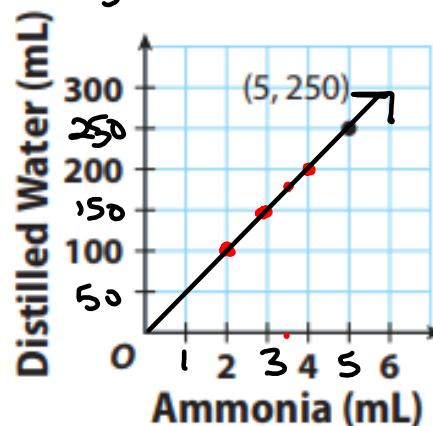
**E** The point (2.5, 125) is on the graph but not in the table. The ratio of the y-coordinate to the x-coordinate is  $\frac{125}{2.5}$ . How is this ratio related to

the ratios in **C** and **D**? equivalent

2.5 milliliters of ammonia requires 125 milliliters of distilled water.

**F Conjecture** What do you think is true for every point on the graph?

equivalent

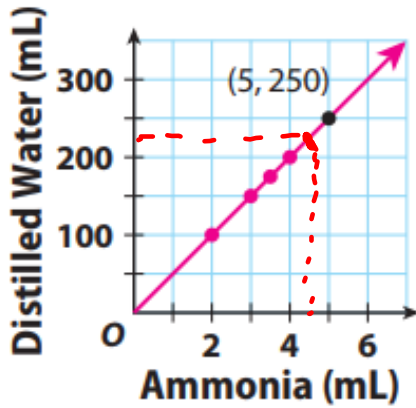


Oct 28-9:32 PM

**Reflect** pg.174

2. **Communicate Mathematical Ideas** How can you use the graph to find the amount of distilled water to use for 4.5 milliliters of ammonia?

*225 ml. of water*



Oct 28-9:36 PM

**Representing Rates with Tables and Graphs**

pg.175

You can use tables and graphs to represent real-world problems involving equivalent rates.

**YOUR TURN**

3. A shower uses 12 gallons of water in 3 minutes. Complete the table and graph.

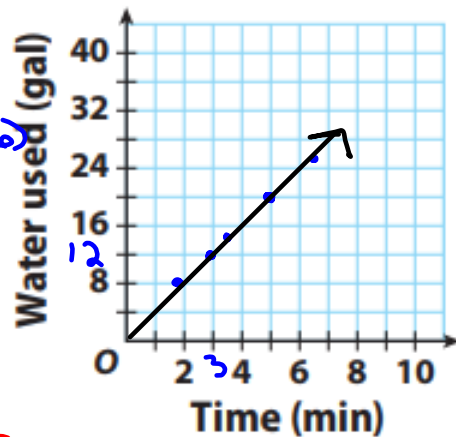
Time (min)	<i>1</i>	2	3	3.5	<i>5</i>	6.5
Water used (gal)	<i>4</i>	8	12	14	20	<i>26</i>

*(2, 8), (3, 12), (3.5, 14), (5, 20), (6.5, 26)*

$$\frac{3}{12} = \frac{1}{4}$$

$$\begin{array}{r} 3.5 \\ \times 4 \\ \hline 14.0 \end{array}$$

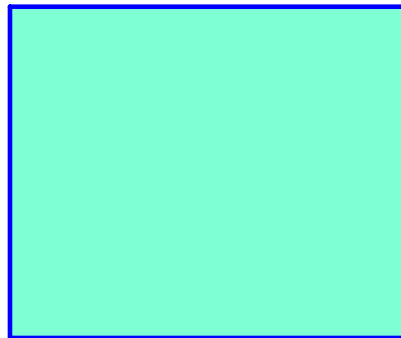
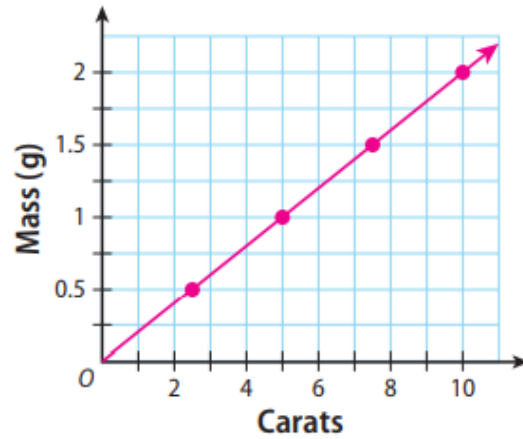
$$\begin{array}{r} 6.5 \\ \times 4 \\ \hline 26.0 \end{array}$$



Oct 28-9:41 PM

The number of carats of a gemstone and the mass of the gemstone in grams are related quantities. Complete the table to show the mass of a ruby in grams for various measures in carats. Then graph the information from the table.

<b>Carats</b>	2.5	5	7.5	10
<b>Mass in grams</b>	0.5	1	1.5	2



Oct 28-9:49 PM

Classwork/homework

textbook page 176 (1-5)

You may do your work directly on the textbook page.

7.1 - 7.2 Quiz this Friday

Oct 28-10:05 PM

## Attachments

---

OnCore\_G6\_U5\_L2\_TN\_p3.pdf