

Additional Exercises 7.6

Form II

Name _____

Date _____

Solve each proportion.

1. $\frac{x}{39} = \frac{4}{13}$

2. $\frac{y+4}{y} = \frac{9}{2}$

3. $\frac{5}{9} = \frac{z-8}{z-4}$

Solve the following problems.

4. Twelve times the reciprocal of a number is equal to 8 times the reciprocal of 6. Find the number.

5. If one more than 3 times a number is divided by the number, the result is four thirds. Find the number.

6. If fifteen less than two times a number is divided by six more than the number, the result is four less than 9 times the reciprocal of the number. Find the number.

7. George can install new wiring for a computer in 3 hours. It takes Pete 4 hours. How long would it take if they worked together?

8. Marcus assembles crafts in his home. It takes him 2 hours to complete a package of napkin holders. His daughter takes 8 hours to do a package. How long would it take them if they work together?

9. One housekeeper can clean a hotel room twice as fast as another one. Working together, they can clean a room in 8 minutes. How long does it take for each housekeeper to clean a room?

10. A boat can travel 22 miles upstream in the same amount of time it can travel 42 miles downstream. The speed of the current is 5 miles per hour. Find the speed of the boat in still water.

1. $\frac{12}{13}$

2. $\frac{8}{7}$

3. $\frac{13}{9}$

4. $\frac{9}{13}$

5. $\frac{1}{3}$

6. $\frac{3}{13}$

7. $\frac{15}{7}$

8. $\frac{13}{5}$

9. $\frac{12 \text{ min}}{24 \text{ min}}$

10. $\frac{16 \text{ mph}}$

Additional Exercises 7.6 (cont.)

Name _____

11. Olga walks 2 miles at one rate for half of her workout. In the same amount of time, she walks an additional 3 miles at a rate that is 2 miles per hour faster. Find both of Olga's rates.

11. 4 and 6 mph

12. Karl walks 3 miles at one rate for half his workout. In the same amount of time, he walks an additional 4 miles at a rate that is 1 miles per hour faster. Find both of Karl's rates.

12. 3 and 4 mph
35 mph in mountains

13. Cameron and Whitney have a cabin in the mountains. To get there from home, they drive 36 miles on level ground and 20 miles on mountain roads. They can drive 28 miles per hour faster on the level roads than on the mountain ones. Each part of the trip takes the same amount of time. Find both their level and mountain road rates.

13. 63 mph level road

14. For two similar triangles, two sides of the smaller triangle are x and 4. The corresponding sides of the larger triangle are 10 and 16, respectively. Find the length of side x .

14. 2.5

15. Maurice is building a city to go with his model train set. He wants to make a yield sign that is similar to an actual yield sign. An actual yield sign is a triangle that has a top that is 15 in. and two sides that are 12 in. each. If the top of his model yield sign is to have a top that is 1.75 in. How long should the two sides be?

15. 1.4