

Additional Exercises 7.6

Form I

Name _____

Date _____

Solve each proportion.

1. $\frac{x}{38} = \frac{1}{19}$

2. $\frac{2y+3}{y} = \frac{3}{2}$

3. $\frac{5}{11} = \frac{z-7}{z-12}$

Solve the following problems.

4. Two times the reciprocal of a number equals 16 times the reciprocal of 20. Find the number.
5. If three times number added to 7 is divided by the number plus 2, the result is four thirds. Find the number.
6. Five divided by the sum of a number and 3, minus the quotient of 3 and the difference of the number and 3 is equal to 6 times the reciprocal of the difference of the number squared and 9. Find the number.
7. Cindy can finish painting a house in 4 hours. Jenny takes 6 hours to finish the same job. How long would it take if they worked together?
8. One conveyor belt can move 1000 boxes in 12 minutes. Another can move 1000 boxes in 10 minutes. If another conveyor belt is added and all three are used, the boxes are moved in 3 minutes. If the third conveyor belt worked alone, how long would it take to do the same job?
9. Jenny can decorate the day's cookie supply four times as fast as Shauna. If they decorate all the cookies working together in 20 minutes, how long would it take for each of them to decorate the cookies individually?
10. Jerrod bikes at a constant speed for 24 miles. He then returns home at the same speed but takes a different route. His return trip takes one hour longer and is 29 miles. Find his speed.

1. 2

2. -6

3. $\frac{17}{6}$

4. $\frac{5}{2}$

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

6. 15

7. $2\frac{2}{5}$

8. $6\frac{2}{3}$

Jenny: 25min

9. Shauna: 100min

10. 5mph

Additional Exercises 7.6 (cont.)

Name _____

11. A car travels 400 miles on level terrain in the same amount of time it travels 160 miles on mountainous terrain. If the rate of the car is 30 miles per hour less in mountains than on level ground, find its rate in the mountains.
12. Cameron can run 5 miles per hour on level ground on a still day. One windy day, he runs 15 miles with the wind, and in the same amount of time runs 7 miles against the wind. What is the rate of the wind?
13. In a race, Carl starts 1 mile behind Dave. Carl is traveling at 45 miles per hour, while Dave is traveling at 40 miles per hour. How long will it take for Carl to overtake Dave?

14. For two similar triangles, two sides of the smaller triangle are 4 and 5. The corresponding sides of the larger triangle are x and 15, respectively. Find the length of side x .

15. For two similar triangles, the three sides of the smaller triangle are 9, x , and 6. The corresponding sides of the larger triangle are 18, 11, and 12, respectively. Find the length of side x .

11. 20mph

12. $1\frac{1}{11}$ mph

13. 12 min

14. 12

15. 5.5