5.2: Proportions

Give an example of two fractions that are equivalent. Show that they are equivalent.   
Give an example of two fractions that   
are not equivalent. Explain why they are   
not equivalent.

Proportion- An equation stating that two ratios are equivalent

Proportional- Two quantities that form a proportion

Write the fraction in simplest form. Do not change improper fractions to mixed numbers.

1.  2. 

3.  4. 

5.  6. 

7.  8. 

You go to the grocery store to buy cereal.   
How do you determine which cereal brand   
is the better buy?

Tell whether the two rates form a proportion.

1. 5 feet in 4 hours; 15 feet in 12 hours

2. 8 pages in 40 minutes; 15 pages in   
70 minutes

3. 3 pounds for $3.75; 5 pounds for $6.50

4. 2 cups in 4 servings; 5 cups in 10 servings

Tell whether the ratios form a proportion.

1.  2.  3. 

4.  5.  6. 

7.  8.  9. 

Tell whether the two rates form a proportion.

10. 8 feet in 15 seconds; 16 feet in 40 seconds

11. 28 people in 4 rooms; 63 people in 9 rooms

12. 14 girls to 6 boys; 35 girls to 15 boys

13. 45 marbles in 9 bags; 150 marbles in 36 bags

14. You can run 4 laps in 10 minutes. Your friend can run 6 laps in 15 minutes. Are these rates proportional? Explain.

Tell whether the ratios form a proportion.

15.  16.  17. 

18. You get $27 to spend at the mall for doing 6 chores. Your friend gets $36 for doing 8 chores.

a. What is your pay rate?

b. What is your friend's pay rate?

c. Are the pay rates equivalent? Explain.

19. You can buy 4 tickets for $75 or 5 tickets for $94. Are the costs proportional? If not, rewrite one of the rates so the costs are proportional.

20. A recipe requires a ratio of 4 potatoes to 6 carrots. You accidentally use   
5 potatoes with 6 carrots. What is the least number of potatoes and carrots that you can add to get the correct ratio of potatoes to carrots?