

LESSON
5-1 **Practice B**
Ratios

The annual dog show has 22 collies, 28 boxers, and 18 poodles. Write each ratio in all three forms.

1. collies to poodles

2. boxers to collies

3. poodles to boxers

4. poodles to collies

The Franklin School District has 15 art teachers, 27 math teachers, and 18 Spanish teachers. Write the given ratio in all three forms.

5. art teachers to math teachers

6. math teachers to Spanish teachers

7. Spanish teachers to all teachers

8. art and math teachers to Spanish teachers

9. Thirty-two students are asked whether the school day should be longer. Twenty-four vote "no" and 8 vote "yes." Write the ratio of "no" votes to "yes" votes in simplest form.

10. A train car has 64 seats. There are 48 passengers on the train. Write the ratio of seats to passengers in simplest form.

11. Tell whose CD collection has the greater ratio of rock CDs to total CDs.

	Glen	Nina
Classical CDs	4	8
Rock CDs	9	12
Other CDs	5	7

LESSON

Practice B

5-2

Rates

1. A part-time job pays \$237.50 for 25 hours of work. \$ /hour
How much money does the job pay per hour?
2. A class trip consists of 84 students and 6 teachers. How many students per teacher are there? _____
3. A factory builds 960 cars in 5 days. What is the average number of cars the factory produces per day? _____
4. The Wireless Cafe charges \$5.40 for 45 minutes of Internet access. How much money does The Wireless Cafe charge per minute? _____
5. A bowler scores 3,152 points in 16 games. What is his average score in points per game? _____
6. Melissa drives 238 miles in 5 hours. What is her average rate of speed? _____
7. An ocean liner travels 1,233 miles in 36 hours. What is the ocean liner's average rate of speed? _____
8. A plane is scheduled to complete a 1,792-mile flight in 3.5 hours. In order to complete the trip on time, what should be the plane's average rate of speed? _____
9. The Nuthouse sells macadamia nuts in three sizes. The 12 oz jar sells for \$8.65, the 16 oz jar sells for \$10.99, and the 24 oz gift tin costs \$16.99. Which size is the best buy? _____
10. Nina paid \$37.57 for 13 gallons of gas. Fred paid \$55.67 for 19 gallons of gas. Eleanor paid \$48.62 for 17 gallons of gas. Who got the best buy? _____

LESSON

Practice B

5-4

Identifying and Writing Proportions

Determine whether the ratios are proportional.

1. $\frac{3}{4}, \frac{24}{32}$

2. $\frac{5}{6}, \frac{15}{18}$

3. $\frac{10}{12}, \frac{20}{32}$

4. $\frac{7}{10}, \frac{22}{30}$

5. $\frac{9}{6}, \frac{21}{14}$

6. $\frac{7}{9}, \frac{24}{27}$

7. $\frac{4}{10}, \frac{6}{15}$

8. $\frac{7}{12}, \frac{13}{20}$

9. $\frac{4}{9}, \frac{6}{12}$

10. $\frac{7}{8}, \frac{14}{16}$

11. $\frac{9}{10}, \frac{45}{50}$

12. $\frac{3}{7}, \frac{10}{21}$

Find a ratio equivalent to each ratio. Then use the ratios to write a proportion.

13. $\frac{7}{9}$

14. $\frac{11}{12}$

15. $\frac{14}{15}$

16. $\frac{35}{55}$

17. $\frac{14}{10}$

18. $\frac{25}{18}$

LESSON **Puzzles, Twisters & Teasers**
5-4 Draw the Line!

Draw lines to connect the proportional ratios. Then start with number 1 and find the letter next to the answer. Use the letters with each correct answer to solve the riddle.

- | | | |
|---------------------|-----------------|---|
| 1. $\frac{8}{14}$ | $\frac{20}{12}$ | T |
| 2. $\frac{2}{4}$ | $\frac{3}{9}$ | E |
| 3. $\frac{18}{24}$ | $\frac{5}{6}$ | R |
| 4. $\frac{10}{6}$ | $\frac{2}{7}$ | S |
| 5. $\frac{6}{21}$ | $\frac{2}{10}$ | D |
| 6. $\frac{6}{20}$ | $\frac{3}{10}$ | Y |
| 7. $\frac{1}{3}$ | $\frac{25}{15}$ | A |
| 8. $\frac{1}{5}$ | $\frac{3}{4}$ | I |
| 9. $\frac{5}{3}$ | $\frac{12}{24}$ | H |
| 10. $\frac{10}{12}$ | $\frac{4}{7}$ | U |



Why do soccer players do well in math?

4 2 7 6 1 5 7

4 2 7 3 10 2 7 9 8 5