**Chapter 4 Study guide**

**Estimate each product.**

 **1.** $\frac{1}{9}$ × 39

 **2.** $\frac{10}{11}$ × $\frac{3}{5}$

 **3.** The average population of a certain city is 4$\frac{7}{8}$ million people. Suppose each person produces an average of 2$\frac{2}{9}$ pounds of garbage each day. About how much garbage would be produced each day?

**Multiply. Write in simplest form.**

 **4.** 8 × $\frac{4}{9}$

 **5.** $\frac{3}{16}$ × $\frac{5}{12}$

 **6.** $\frac{3}{7}$ × 2$\frac{5}{8}$

 **7.** A container holds $\frac{1}{4}$ gallon of oil. Jonathan is changing the oil on his car and needs 5 containers. How many gallons of oil does Jonathan need?

 **8.** Renee spent $\frac{1}{8}$ of the day landscaping around the house. She spent $\frac{1}{2}$ of that time pulling weeds. What fraction of the day did Renee spend pulling weeds?

 **9.** A recipe make 5$\frac{1}{2}$ dozen cookies. Marquis needs to make 3$\frac{3}{4}$ times this amount. How many dozens of cookies will he make?

 **10.** Use the *draw a diagram* strategy to solve. Elvin read $\frac{3}{7}$ of the pages in his book. He has 56 pages left to read. How many pages has he read already?



**1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**6. \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**7. \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**8. \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**9. \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**10. \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Divide. Write in simplest form.**

**11.** 5 ÷ $\frac{1}{7}$

**12.** $\frac{1}{2}$ ÷ $\frac{5}{9}$

**13.** $\frac{2}{3}$ ÷ $\frac{5}{7}$

**14.** $\frac{7}{9}$ ÷ $5\frac{4}{9}$

**Solve each problem. Write in simplest form.**

**15.** Spencer spent 4 hours doing chores over the weekend. If he spent $\frac{2}{3}$ of an hour for each chore, how many chores did he do?

**16.** Duane bought 68$\frac{3}{4}$ inches of chain for an art project. How many 15-inch chains can he make from it?

**17.** Mrs. Franks has 45 pounds of grain to divide among the farm animals. If each animal receives $\frac{3}{4}$ pound of grain for each feeding, how many times can Mrs. Franks feed her animals?

**18.** Mr. Godfrey is making his famous pasta salad. The recipe calls for 1$\frac{4}{5}$ cups of Italian dressing, 4 cups of pasta, $\frac{3}{5}$ of a cup of chopped peppers and $\frac{5}{6}$ of a cup of cubed cheddar cheese.

1. He wants to make 5 batches of his pasta salad for the game on Sunday, how much of each ingredient will he need?
2. If he has 4 cups of Italian dressing, 9 cups of pasta, 2 cups of chopped peppers and 2$\frac{9}{10}$ cups of cheese, how many **full** batches of pasta salad can he make?
3. Which ingredient will he run out of first in the problem above? How did you figure that out?

**11. \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**12. \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**13. \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**14. \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**15. \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**16. \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**17. \_\_\_\_\_\_\_\_\_\_\_\_\_\_**