Name _____ Class _____ Date _____

Practice 1-3

Ratios with Fractions

1. Write the ratio $\frac{2}{3}$ to 8 as a fraction in simplest form.

2. A recipe includes 8 cups of flour and $\frac{2}{3}$ cup of sugar. Write the ratio of the amount of flour to the amount of sugar as a fraction in simplest form.

3. Write the ratio $\dfrac{\frac{4}{9}}{\frac{5}{9}}$ in simplest form.

4. Write the ratio $\dfrac{\frac{1}{7}\text{ yd}}{\frac{3}{5}\text{ yd}}$ in simplest form.

5. You mix $3\frac{1}{2}$ quarts of juice with $5\frac{1}{4}$ quarts of ginger ale to make fruit punch. What is the ratio of the amount of juice to the amount of ginger ale in simplest form?

6. A model of a famous statue is $2\frac{1}{2}$ inches tall. The actual statue is $6\frac{2}{3}$ feet tall. What is the ratio of the height of the model to the height of the actual statue in simplest form?

7. a) **Writing** Write the ratio $\dfrac{\frac{2}{3}\text{ lb}}{\frac{4}{5}\text{ lb}}$ in simplest form.

   b) Is there more than one way to get the simplest form? Explain.

8. a) **Reasoning** Write the ratio $\dfrac{\frac{2}{3}}{\frac{1}{5}}$ in simplest form.

   b) How is the simplest form of the ratio $\dfrac{\frac{2}{3}}{\frac{1}{5}}$ related to the simplest form of the ratio $\dfrac{\frac{1}{5}}{\frac{2}{3}}$? Explain.

9. **Error Analysis** A covered bridge is $6\frac{2}{3}$ yards long. In a painting for sale at a gallery, the bridge is $1\frac{1}{4}$ feet long. A customer wants to know the ratio of the length of the bridge in the painting to the actual length of the bridge. One salesperson says the ratio in simplest form is $\frac{3}{16}$. Another salesperson says the ratio in simplest form is $\frac{1}{16}$.

a) Which ratio is correct?

b) What error leads to the incorrect ratio?
- ○ A. using terms with different units to find the ratio
- ○ B. not simplifying the terms of the ratio
- ○ C. reversing the terms of the ratio

10. **Distance Ratios** Tamar travels $\frac{8}{9}$ mile to the grocery store. Melkon travels 4 miles to the grocery store.

   a) Write the ratio of the distance Melkon travels to the distance Tamar travels as a fraction in simplest form.

   b) Write the ratio of the distance Tamar travels to the distance Melkon travels as a fraction in simplest form.

11. **Mental Math** Write the ratio $\frac{6}{7}$ to 8 as a fraction in simplest form.

12. Marcial spends $\frac{4}{5}$ hour drawing on Monday. He spends a total of 6 hours drawing from Tuesday to Friday and a total of 2 hours on Saturday and Sunday. Write the ratio of the time Marcial spends drawing on Monday to the time he spends drawing the rest of the week as a fraction in simplest form.

13. A length of a tunnel on a construction plan is $3\frac{1}{2}$ feet long. The actual tunnel is to be $51\frac{1}{3}$ yards long. What will be the ratio, in simplest form, of the length of the actual tunnel to the length on the construction plan?

14. **Challenge** The surface of a computer chip is a rectangle with length $\frac{7}{32}$ inch and width $\frac{1}{16}$ inch.

   a) Write the ratio of the length of the rectangle to the perimeter of the rectangle as a fraction in simplest form.

   b) Write the ratio of the width to the perimeter as a fraction in simplest form.

$\frac{7}{32}$ in.

$\frac{1}{16}$ in.

(Figure is not to scale)

15. **Challenge** A square garden has side length $6\frac{4}{9}$ yards. A square flower bed measures $7\frac{1}{4}$ feet on each side.

   a) What is the ratio of the side length of the garden to the side length of the flower bed in simplest form?

   b) What is the ratio of the area of the garden to the area of the flower bed?
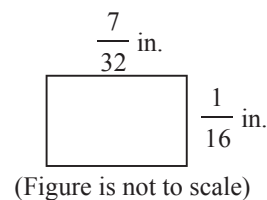
1. $\dfrac{1}{12}$

2. 12

3. $\dfrac{4}{5}$

4. $\dfrac{5}{21}$

5. $\dfrac{2}{3}$

6. $\dfrac{1}{32}$

7. a) $\dfrac{5}{6}$

   b) Answers will vary

8. a) $\dfrac{10}{3}$

   b) Answers will vary

9. a) $\dfrac{1}{16}$

   b) A

10. a) $\dfrac{9}{2}$

    b) $\dfrac{2}{9}$

11. $\dfrac{3}{28}$

12. $\dfrac{1}{10}$

13. 44

14. a) $\dfrac{7}{18}$

    b) $\dfrac{1}{9}$

15. a) $\dfrac{8}{3}$

    b) $\dfrac{64}{9}$