

The Farmers' Museum Quilt Math Worksheet: Fractions

Name Answer Key

Date _____

Directions: Use the vocabulary words and definitions from the Quilt Math lesson to complete the following sentences.

1. The numerator is the top number of the fraction $\frac{1}{2}$
 a. Write your own fraction in the box and circle the numerator

2. The denominator is the bottom number of a fraction $\frac{2}{4}$
 a. Write your own fraction in the box and circle the denominator

3. A whole fraction is equal to the size of a whole. $\frac{4}{4}$
 a. Write an example of a whole fraction in the box

4. Fractions can only be added if the denominators are the same.

Adding Fractions

Adding Fractions

Adding Fractions with Like Denominators

Add the numerators.
Denominator is unchanged.

$$\frac{1}{7} + \frac{3}{7}$$

$$\frac{1+3}{7}$$

$$\frac{4}{7}$$

Adding Fractions with Unlike Denominators

Rewrite with common denominator

$$\frac{1}{8} + \frac{2}{3}$$

$$3 \times \frac{1}{8} + \frac{2 \times 8}{3 \times 8}$$

$$\frac{3}{24} + \frac{16}{24}$$

Add the numerators

$$\frac{19}{24}$$

5. $\frac{1}{2} + \frac{1}{2} = \underline{\frac{2}{2} = 1}$



6. $\frac{1}{3} + \frac{1}{3} = \underline{\frac{2}{3}}$

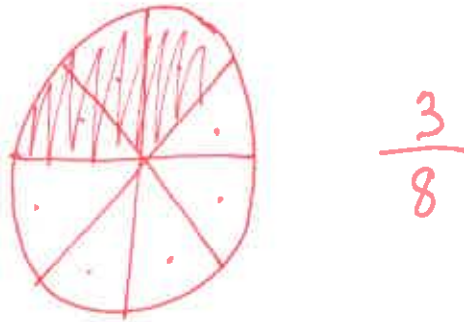


7. $\frac{1}{6} + \frac{4}{6} = \underline{\frac{5}{6}}$



8. Draw a diagram under each of the last three questions to show what the fractions mean.

9. Draw a circle and divide it in half as many times as you can. Then shade in three sections. What is the fraction for this circle?



Adding Fractions with Uncommon Denominators

Instructions: Add the following fractions showing each step of your work. Reduce to the lowest common denominator. (Simplify)

$$10. \frac{2}{4} + \frac{1}{2} = \boxed{1} \quad \begin{array}{l} \frac{2}{4} \times 2 = \frac{4}{8} \\ \frac{1}{2} \times 4 = \frac{4}{8} \end{array} \quad \begin{array}{l} \frac{4}{8} + \frac{4}{8} = \frac{8}{8} = \boxed{1} \end{array}$$

$$11. \frac{2}{3} + \frac{3}{4} = \boxed{1\frac{5}{12}} \quad \begin{array}{l} \frac{2}{3} \times 4 = \frac{8}{12} \\ \frac{3}{4} \times 3 = \frac{9}{12} \end{array} \quad \frac{8}{12} + \frac{9}{12} = \frac{17}{12} = \boxed{1\frac{5}{12}}$$

$$12. \frac{1}{3} + \frac{3}{4} = \boxed{1\frac{1}{12}} \quad \begin{array}{l} \frac{1}{3} \times 4 = \frac{4}{12} \\ \frac{3}{4} \times 3 = \frac{9}{12} \end{array} \quad \frac{4}{12} + \frac{9}{12} = \frac{13}{12} = \boxed{1\frac{1}{12}}$$

$$13. \frac{2}{3} + \frac{3}{8} = \boxed{1\frac{1}{24}} \quad \begin{array}{l} \frac{2}{3} \times 8 = \frac{16}{24} \\ \frac{3}{8} \times 3 = \frac{9}{24} \end{array} \quad \frac{16}{24} + \frac{9}{24} = \frac{25}{24} = \boxed{1\frac{1}{24}}$$

$$14. \frac{5}{4} + \frac{3}{6} = \boxed{1\frac{3}{4}} \quad \begin{array}{l} \frac{5}{4} \times 6 = \frac{30}{24} \\ \frac{3}{6} \times 4 = \frac{12}{24} \end{array} \quad \frac{30}{24} + \frac{12}{24} = \frac{42}{24} = 1\frac{18}{24} = 1\frac{3}{4}$$

$$15. \frac{3}{7} + \frac{1}{2} = \boxed{1\frac{13}{14}} \quad \begin{array}{l} \frac{3}{7} \times 2 = \frac{6}{14} \\ \frac{1}{2} \times 7 = \frac{7}{14} \end{array} \quad \frac{6}{14} + \frac{7}{14} = \frac{13}{14}$$

$$16. \frac{2}{8} + \frac{3}{4} = \boxed{1} \quad \begin{array}{l} \frac{2}{8} \times 4 = \frac{8}{32} \\ \frac{3}{4} \times 8 = \frac{24}{32} \end{array} \quad \frac{8}{32} + \frac{24}{32} = \frac{32}{32} = \boxed{1}$$

$$17. \frac{8}{4} + \frac{4}{2} = \boxed{4} \quad \begin{array}{l} \frac{8}{4} \times 2 = \frac{16}{8} \\ \frac{4}{2} \times 4 = \frac{16}{8} \end{array} \quad \frac{16}{8} + \frac{16}{8} = \frac{32}{8} = \boxed{4}$$

$$18. \frac{1}{7} + \frac{1}{2} = \boxed{1\frac{9}{14}} \quad \begin{array}{l} \frac{1}{7} \times 2 = \frac{2}{14} \\ \frac{1}{2} \times 7 = \frac{7}{14} \end{array} \quad \frac{2}{14} + \frac{7}{14} = \frac{9}{14}$$

$$19. \frac{3}{5} + \frac{1}{8} = \boxed{1\frac{29}{40}} \quad \begin{array}{l} \frac{3}{5} \times 8 = \frac{24}{40} \\ \frac{1}{8} \times 5 = \frac{5}{40} \end{array} \quad \frac{24}{40} + \frac{5}{40} = \frac{29}{40}$$

$$20. \frac{3}{4} + \frac{3}{6} = \boxed{1\frac{1}{4}} \quad \begin{array}{l} \frac{3}{4} \times 6 = \frac{18}{24} \\ \frac{3}{6} \times 4 = \frac{12}{24} \end{array} \quad \frac{18}{24} + \frac{12}{24} = \frac{30}{24} = 1\frac{6}{24} = 1\frac{1}{4}$$