Skills Practice

Name _____ Date _____

I. Dividing a Whole into Fractional Parts

A. The Glossary of your textbook is like a dictionary, where you can look up the definitions of math terms. The pages of a glossary or dictionary are organized into columns of equal width.

1. If a dictionary page has 3 columns, what fraction of the page is represented by 1 column?

2. If a dictionary page has 5 columns, what fraction of the page is represented by 1 column?

3. If a dictionary page has 4 columns, what fraction of the page is represented by 1 column?

4. Consider the dictionary page layouts above. If the pages are all the same size, which column is the widest?

5. If a dictionary page has 4 columns, what fraction of the page is represented by 2 columns?

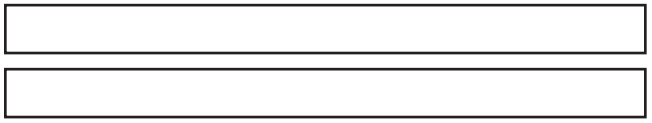
6. Write an equivalent fraction to represent how much space the 2 columns take up on the page.

7. If a dictionary page has 6 columns, what fraction of the page is represented by 2 columns?

8. Write an equivalent fraction to represent how much space the 2 columns take up on the page.

B. Divide the strips into equal parts and shade to determine the equivalent fraction.

1. Show that $\frac{2}{3}$ is equivalent to $\frac{\ }{9}$.



2. Show that $\frac{1}{4}$ is equivalent to $\frac{}{8}$.

3. Show that $\frac{1}{3}$ is equivalent to $\frac{}{6}$.

4. Show that $\frac{1}{3}$ is equivalent to $\frac{}{9}$.

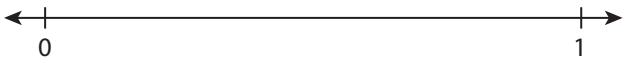
5. Show that $\frac{3}{5}$ is equivalent to $\frac{}{10}$.

6. Show that $\frac{2}{3}$ is equivalent to $\frac{}{6}$.

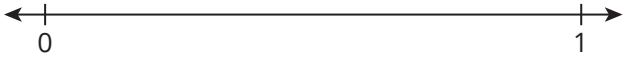
II. Benchmark Fractions

A. Label the given number line to represent the fractional part provided and plot each fraction.

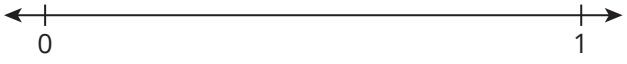
1. Divide the number line into halves. Plot $\frac{1}{2}$.



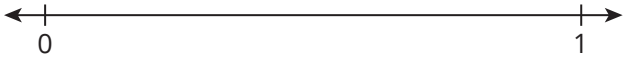
2. Divide the number line into sixths. Plot $\frac{2}{6}$ and $\frac{5}{6}$.



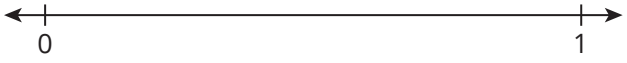
3. Divide the number line into thirds. Plot $\frac{1}{3}$ and $\frac{2}{3}$.



4. Divide the number line into fifths. Plot $\frac{1}{5}$ and $\frac{3}{5}$.



5. Divide the number line into ninths. Plot $\frac{3}{9}$, $\frac{6}{9}$, and $\frac{8}{9}$.



6. Divide the number line into tenths. Plot $\frac{2}{10}$, $\frac{3}{10}$, $\frac{5}{10}$, and $\frac{9}{10}$.

B. Name the closest benchmark fraction to each given fraction.

1. $\frac{1}{9}$

2. $\frac{5}{12}$

3. $\frac{16}{18}$

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

5. $\frac{13}{14}$

6. $\frac{3}{61}$

C. Fill in the missing numerator or denominator so that each fraction is close to but less than $\frac{1}{2}$.

1. $\frac{\quad}{17}$

2. $\frac{4}{\quad}$

3. $\frac{12}{\quad}$

4. $\frac{\quad}{7}$

5. $\frac{\quad}{5}$

6. $\frac{9}{\quad}$

D. Fill in the missing numerator or denominator so that each fraction is close to but less than 1.

1. $\frac{\quad}{15}$

2. $\frac{4}{\quad}$

3. $\frac{8}{\quad}$

4. $\frac{\quad}{11}$

5. $\frac{\quad}{13}$

6. $\frac{22}{\quad}$

E. Rewrite each expression using benchmark fractions. Then estimate the sum.

1. $\frac{7}{15} + \frac{21}{23}$

2. $\frac{9}{72} + \frac{23}{50}$

3. $\frac{2}{41} + \frac{12}{13}$

4. $\frac{6}{7} + \frac{11}{12} + \frac{4}{9}$

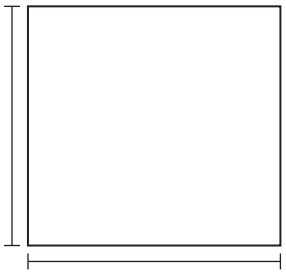
5. $\frac{7}{15} + \frac{8}{14} + \frac{3}{7}$

6. $\frac{11}{23} + \frac{13}{14} + \frac{9}{10} + \frac{2}{25}$

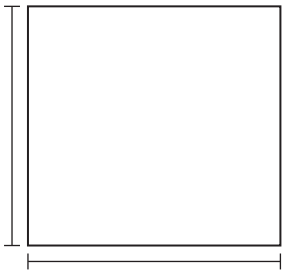
III. Multiplying Fractions

A. Represent each product using an area model. Then calculate the product.

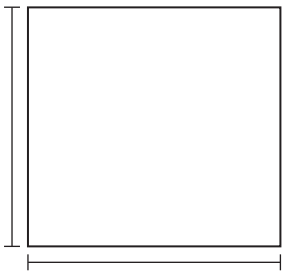
1. $\frac{3}{4} \times \frac{1}{3}$



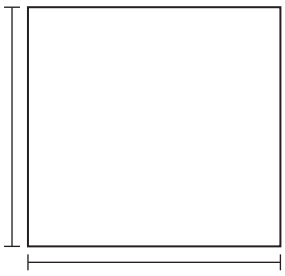
2. $\frac{1}{2} \times \frac{3}{5}$



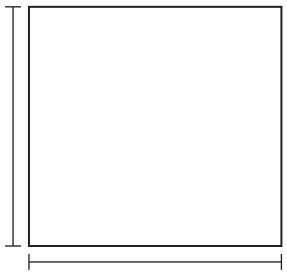
3. $\frac{1}{6} \times \frac{2}{3}$



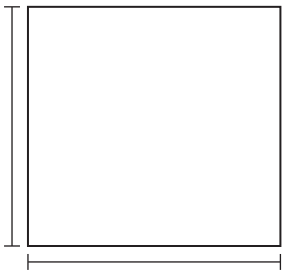
4. $\frac{1}{3} \times \frac{4}{5}$



5. $\frac{1}{4} \times \frac{1}{3}$



6. $\frac{1}{2} \times \frac{5}{6}$



B. Calculate each product. Simplify if necessary.

1. $\frac{3}{5} \times \frac{4}{7}$

2. $\frac{2}{9} \times \frac{1}{4}$

3. $\frac{2}{5} \times \frac{10}{13}$

4. $\frac{3}{7} \times \frac{4}{5}$

5. $\frac{3}{4} \times \frac{1}{12}$

6. $\frac{1}{6} \times \frac{12}{13}$

C. Determine whether the first factor will increase or decrease when multiplied by the second factor.

1. $7 \times \frac{1}{2}$

2. $\frac{4}{5} \times 8$

3. 7×3

4. $10 \times \frac{9}{10}$

5. $\frac{2}{3} \times \frac{1}{2}$

6. $\frac{3}{8} \times 9$

D. Calculate each product. Write your answer in simplest form.

1. $3\frac{4}{5} \times 2\frac{1}{2}$

2. $1\frac{3}{8} \times 6\frac{1}{4}$

3. $5\frac{2}{3} \times 4\frac{1}{6}$

4. $2\frac{1}{3} \times 7\frac{1}{4}$

5. $6\frac{1}{2} \times 1\frac{3}{4}$

6. $3\frac{1}{8} \times 5\frac{1}{2}$

IV. Fraction by Fraction Division

A. Calculate each quotient by rewriting it as a multiplication problem. Then simplify your answer.

1. $\frac{7}{4} \div \frac{11}{7} = ?$

2. $\frac{8}{3} \div \frac{2}{5} = ?$

3. $\frac{1}{2} \div 4 = ?$

4. $9 \div \frac{3}{5} = ?$

5. $\frac{15}{8} \div \frac{4}{3} = ?$

6. $\frac{10}{3} \div \frac{1}{6} = ?$

B. Calculate each quotient. Simplify your answer.

1. $9\frac{1}{3} \div 2\frac{1}{3}$

2. $10\frac{1}{5} \div 3\frac{2}{5}$

3. $19 \div 6\frac{1}{4}$

4. $12\frac{1}{2} \div 2\frac{1}{3}$

5. $15\frac{2}{3} \div 4\frac{5}{6}$

6. $5\frac{1}{2} \div 1\frac{1}{4}$

C. Solve each problem.

1. Hector has 6 cups of popcorn. How many friends can he share the popcorn with if each is given $\frac{2}{3}$ cup?

2. Sherwin has 3 cups of grapes. He likes to pack $\frac{3}{4}$ cup of fruit in his lunch each day. How many days can Sherwin pack grapes in his lunch?

3. Lea has $\frac{3}{4}$ cup of laundry detergent left in the detergent bottle. Each load of laundry requires $\frac{1}{6}$ cup of detergent. How many loads of laundry can Lea wash?

4. LaVonne has $\frac{4}{5}$ cup of blueberries. A batch of blueberry muffins requires $\frac{1}{3}$ cup of blueberries. How many batches of blueberry muffins can LaVonne make?

5. Nina has $\frac{2}{3}$ cup of shampoo left in the shampoo bottle. She uses $\frac{1}{8}$ cup of shampoo to wash her hair. If Nina washes her hair every day, how many days can she wait before opening a new bottle of shampoo?

6. Carmen has 5 pints of strawberries. She needs $\frac{3}{2}$ pints to make a batch of strawberry ice cream. How many batches of strawberry ice cream can Carmen make?