Name _____

Equivalent Fraction Find

In the grid below, circle seven fractions that are equivalent to $\frac{2}{4}$.

$\frac{2}{6}$	$\frac{7}{12}$	$\frac{1}{4}$	$\frac{8}{10}$	$\frac{7}{8}$	$\frac{4}{5}$
$\frac{6}{12}$	$\frac{3}{10}$	$\frac{2}{3}$	$\frac{5}{12}$	$\frac{2}{8}$	$\frac{1}{2}$
$\frac{2}{5}$	$\frac{40}{100}$	$\frac{5}{6}$	$\frac{3}{12}$	$\frac{50}{100}$	$\frac{10}{12}$
$\frac{4}{8}$	$\frac{8}{12}$	$\frac{5}{10}$	$\frac{60}{100}$	$\frac{3}{8}$	$\frac{5}{8}$
$\frac{3}{4}$	$\frac{6}{10}$	$\frac{2}{12}$	$\frac{4}{6}$	$\frac{8}{16}$	$\frac{3}{5}$
$\frac{1}{5}$	$\frac{3}{6}$	$\frac{6}{8}$	$\frac{4}{12}$	$\frac{7}{10}$	$\frac{1}{8}$

1. Find two fractions in the grid that are not equivalent to $\frac{2}{4}$, but that are equivalent to each other.

Possible answer: $\frac{8}{10}$ and $\frac{4}{5}$

2. Write Math Describe how you determined which fractions in the grid are equivalent to $\frac{2}{4}$.

Possible answer: Fractions are equivalent to $\frac{2}{4}$ when the numerator and denominator are the same number of times greater or less than the numerator and denominator in $\frac{2}{4}$.

Name _____

Equivalent Art

Write the fraction represented by the shaded part of each design. Then write 3 fractions that are equivalent to that fraction.

Possible answers are given.

1. 

Fraction represented by the shaded part of the design: $\frac{3}{6}$

Three equivalent fractions: $\frac{6}{12}, \frac{9}{18}, \frac{12}{24}$

2. 

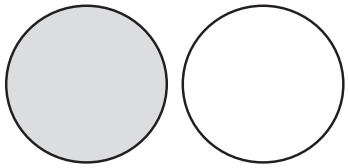
Fraction represented by the shaded part of the design: $\frac{2}{3}$

Three equivalent fractions: $\frac{4}{6}, \frac{6}{9}, \frac{8}{12}$

3. 

Fraction represented by the shaded part of the design: $\frac{3}{5}$

Three equivalent fractions: $\frac{6}{10}, \frac{9}{15}, \frac{12}{20}$

4. 

Fraction represented by the shaded part of the design: $\frac{1}{2}$

Three equivalent fractions: $\frac{2}{4}, \frac{3}{6}, \frac{4}{8}$

5. 

Fraction represented by the shaded part of the design: $\frac{2}{8}$

Three equivalent fractions: $\frac{4}{16}, \frac{6}{24}, \frac{8}{32}$

6. 

Fraction represented by the shaded part of the design: $\frac{2}{6}$

Three equivalent fractions: $\frac{4}{12}, \frac{6}{18}, \frac{8}{24}$

7. Stretch Your Thinking There is a relationship between the shaded part of each design and the unshaded part. Describe this relationship.

Possible answer: the sum of the number of shaded and non-shaded parts of each design is equal to the total number of parts in the whole design.

Name _____

To Simplify or Not To Simplify?

Tell whether each fraction below is in simplest form. If a fraction is in simplest form, write *Simplest form*. If a fraction is not in simplest form, write it in simplest form.

1. $\frac{4}{8}$	$\frac{1}{2}$	**2.** $\frac{10}{12}$	$\frac{5}{6}$	**3.** $\frac{4}{5}$	Simplest form
4. $\frac{9}{10}$	Simplest form	**5.** $\frac{2}{3}$	Simplest form	**6.** $\frac{19}{100}$	Simplest form
7. $\frac{6}{8}$	$\frac{3}{4}$	**8.** $\frac{1}{6}$	Simplest form	**9.** $\frac{7}{12}$	Simplest form
10. $\frac{5}{12}$	Simplest form	**11.** $\frac{4}{6}$	$\frac{2}{3}$	**12.** $\frac{3}{4}$	Simplest form
13. $\frac{2}{5}$	Simplest form	**14.** $\frac{2}{8}$	$\frac{1}{4}$	**15.** $\frac{5}{8}$	Simplest form
16. $\frac{3}{10}$	Simplest form	**17.** $\frac{47}{100}$	Simplest form	**18.** $\frac{4}{12}$	$\frac{1}{3}$

19. Write Math Describe how you determined which fractions were already in simplest form.

Possible answer: I looked for common factors in the numerator and the denominator of each fraction.

Name _____

Common Denominator Combos

For each group of fractions below, find a common denominator. Then write the group of fractions as a group of fractions with a common denominator.

Possible answers are given.

Fractions	Common Denominator	Equivalent Fractions
1. $\frac{2}{3}, \frac{3}{4}, \frac{5}{6}$	12	$\frac{8}{12}, \frac{9}{12}, \frac{10}{12}$
2. $\frac{5}{8}, \frac{1}{3}, \frac{1}{2}$	24	$\frac{15}{24}, \frac{8}{24}, \frac{12}{24}$
3. $\frac{2}{3}, \frac{7}{9}, \frac{1}{6}$	18	$\frac{12}{18}, \frac{14}{18}, \frac{3}{18}$
4. $\frac{4}{9}, \frac{5}{6}, \frac{1}{4}$	36	$\frac{16}{36}, \frac{30}{36}, \frac{9}{36}$
5. $\frac{1}{5}, \frac{2}{3}, \frac{1}{2}, \frac{5}{6}$	30	$\frac{6}{30}, \frac{20}{30}, \frac{15}{30}, \frac{25}{30}$

6. Write Math Compare the processes for finding common denominators for two, three, and four fractions.

Possible answer: the processes for finding common denominators for two, three, and four fractions are the same, except you have to list more multiples when there are more fractions. In all cases, you must find a common multiple.

Name _____

Factors, Fractions, and Fruit

Callie is starting a fruit basket business. The largest fruit basket will contain 30 pieces of fruit. Other baskets may contain fewer, but at least 12, pieces of fruit. In every basket, $\frac{1}{2}$ of the pieces of fruit must be apples, $\frac{1}{3}$ must be oranges, and $\frac{1}{6}$ must be bananas. What combinations of pieces of fruit represent all the possible fruit baskets Callie can make?

Fill in the table to solve the problem.

Total Pieces of Fruit in Basket	Common Denominator	Fractions	Combination of Fruit
1. 12	12	$\frac{6}{12}, \frac{4}{12}, \frac{2}{12}$	6 apples, 4 oranges, 2 bananas
2. 18	18	$\frac{9}{18}, \frac{6}{18}, \frac{3}{18}$	9 apples, 6 oranges, 3 bananas
3. 24	24	$\frac{12}{24}, \frac{8}{24}, \frac{4}{24}$	12 apples, 8 oranges, 4 bananas
4. 30	30	$\frac{15}{30}, \frac{10}{30}, \frac{5}{30}$	15 apples, 10 oranges, 5 bananas

5. Write Math There is a pattern in the combinations as the total number of pieces of fruit increases. Describe any patterns you notice.

Possible answers: the number of apples is half the total number of pieces of fruit. The number of oranges is twice the number of bananas. The sum of the number of oranges and bananas equals the number of apples.

Name _____

At the Pet Store

Use the table for 1–8.

Types of Pets in the Pet Store					
Pets	Puppies	Fish	Turtles	Parakeets	Rabbits
Fraction of Total Number of Pets	$\frac{1}{4}$	$\frac{1}{3}$	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{2}{12}$

1. The pet store has the same number of which two animals?

parakeets and rabbits

2. Are there more puppies or more fish?

more fish

3. Are there more parakeets or more turtles?

more parakeets

4. Are there more puppies or more rabbits?

more puppies

5. Are there more turtles or more rabbits?

more rabbits

6. The pet store has the most of which animal?

fish

7. The pet store has the fewest of which animal?

turtles

8. Are there more fish or more turtles?

more fish

9. **Stretch Your Thinking** Suppose a pet store owner has 12 pets and wants $\frac{1}{2}$ of the total number of pets to be fish. How many fish does the owner need? Explain how you know.

6; Possible explanation: $\frac{6}{12}$ is the same as $\frac{1}{2}$.

Name _____

Parts of a Project

For a project, Damian, Tim, and Keisha split the work. Damian completed $\frac{1}{6}$ of the project, Keisha completed $\frac{7}{12}$ of the project, and Tim completed $\frac{1}{4}$ of the project. Who completed the greatest part, the second greatest part, and the least part of the project?

1. Fill in the table to solve the problem.

Name	Fraction of the Project	Common Denominator	Fraction with Common Denominator
Damian	$\frac{1}{6}$	12	$\frac{2}{12}$
Keisha	$\frac{7}{12}$	12	$\frac{7}{12}$
Tim	$\frac{1}{4}$	12	$\frac{3}{12}$

2. Write the fractions in order from greatest to least.

$\frac{7}{12}, \frac{1}{4}, \frac{1}{6}$

3. Write the names of the students in the order starting with who completed the greatest part of the project to who completed the least part of the project.

Keisha, Tim, Damian

4. Write Math There is a relationship between all of the numerators in the fractions with the common denominator. Describe the relationship.

Possible answer: the sum of the numerators must equal 12 to make one whole; $2 + 7 + 3 = 12$ and $\frac{12}{12} = 1$.

Filling Cups

Leo, Steve, and Isabelle each have identical cups to fill with water. Leo fills his cup $\frac{3}{4}$ full, and Steve fills his cup $\frac{2}{5}$ full. Isabel is asked to fill her cup so that the amount of water in her cup is between the amounts of water in Leo's and Steve's cups. What could be the amount of water Isabelle puts in her cup?

Fill in the table to solve the problem.

Name	Fraction of Cup Filled	Common Denominator	Fraction with Common Denominator
Leo	$\frac{3}{4}$	20	$\frac{15}{20}$
Steve	$\frac{2}{5}$	20	$\frac{8}{20}$

1. Write the fractions in order from least to greatest.
   $\frac{2}{5}, \frac{3}{4}$

2. Use your common denominator. What fractions with this denominator are between $\frac{3}{4}$ and $\frac{2}{5}$?
   $\frac{9}{20}$ through $\frac{14}{20}$

3. Can Isabelle use these fractions to decide how much water to put in her cup?
   Yes; any of those listed, because all of the fractions are between $\frac{2}{5}$ and $\frac{3}{4}$.

4. **Stretch Your Thinking** How can you find a fraction between the fractions $\frac{14}{20}$ and $\frac{15}{20}$?
   Possible answer: you can multiply the numerators and denominators by 2 to get $\frac{28}{40}$ and $\frac{30}{40}$. The fraction $\frac{29}{40}$ is between these two fractions.