Name _____

• Simplifying Improper Fractions

- To simplify improper fractions and mixed numbers:
  1. Divide the numerator of the improper fraction by its denominator. You should get a mixed number result.
  2. Add it to the whole number in the original mixed number.
  3. Reduce as necessary.

Example: $3\frac{12}{5}$

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

$3 + 2\frac{2}{5} = 5\frac{2}{5}$

Practice:

Simplify each improper fraction.

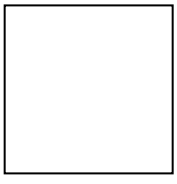
1. $\frac{7}{4}$ $4\overline{)7}$ **2.** $\frac{11}{3}$ $3\overline{)11}$ **3.** $1\frac{9}{2}$ $2\overline{)9}$

4. $\frac{14}{6}$ $6\overline{)14}$ **5.** $2\frac{15}{6}$ $6\overline{)15}$ **6.** $3\frac{13}{3}$ $3\overline{)13}$

Simplify your answers.

7. $1\frac{2}{3} + 1\frac{2}{3} =$ _____ **8.** $2\frac{4}{5} + 4\frac{4}{5} =$ _____ **9.** $\frac{4}{3} \times \frac{3}{2} =$ _____

10. Each side of this square is $\frac{7}{8}$ inches long. What is the perimeter of the square? Remember to write the units.



$\frac{7}{8}$ in.

_____

Name _____

Reteaching **92**

Lesson 92

• Dividing by Two-Digit Numbers

- Use long division when dividing by two-digit numbers.
    1. Try the "first digit trick."
    2. Try compatible numbers.
    3. Then follow the division algorithm.
    4. Use zero as a placeholder in the quotient.

Example:

$34\overline{)992}$ Think: $3\overline{)9}$

Try 3. If 3 is too much, try 2.

Continue algorithm until finished.

$$\begin{array}{r} 0\,2\,9\ \text{R}6 \\ 34\overline{)992} \\ 68 \\ \hline 312 \\ 306 \\ \hline 6 \end{array}$$

Practice:

Divide.

1. $12\overline{)345}$ R

2. $21\overline{)964}$ R

3. $15\overline{)406}$ R

4. $24\overline{)830}$ R

5. $18\overline{)361}$ R

6. $30\overline{)583}$ R

7. $40\overline{)741}$ R

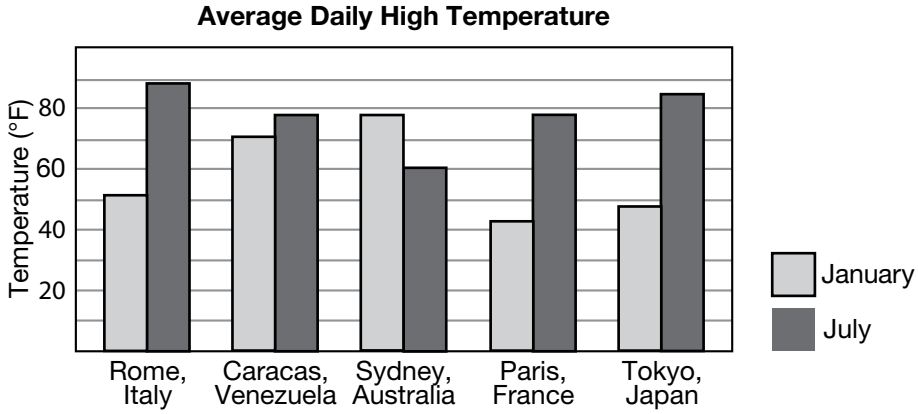
8. $33\overline{)1000}$ R

9. $32\overline{)1465}$ R

• Comparative Graphs

- **Bar graphs** are used to display two or more sets of related data.
- Bar graphs can be horizontal or vertical.

Example: The average daily high temperature in January and July for five cities is displayed in the vertical bar graph below.



Practice:

1. Marlena, Quincy, Latricia, and Brandy each play two rounds of mini golf. The scores for each student are shown in the table below.

Student	Round 1	Round 2
Marlena	29	23
Quincy	34	28
Latricia	21	29
Brandy	28	30

Make a horizontal bar graph to show the scores. Draw two bars for each player.

Name _____

Reteaching **94**

Lesson 94

• Using Estimation When Dividing by Two-Digit Numbers

- Use long division when dividing by two-digit numbers.
    1. Round off the divisor and the dividend before guessing.
    2. Then follow the division algorithm.
    3. Use zero as a placeholder in the quotient.

Example: $18\overline{)394}$ Think: $20\overline{)400}$

Try 2.
Continue algorithm until finished.

$$\begin{array}{r} 0\,2\,1\ \text{R16} \\ 18\overline{)394} \\ \underline{36} \\ 34 \\ \underline{18} \\ 16 \end{array}$$

Practice:

1. $17\overline{)631}$ R

2. $32\overline{)268}$ R

3. $40\overline{)820}$ R

4. $27\overline{)660}$ R

5. $27\overline{)159}$ R

6. $42\overline{)719}$ R

7. $25\overline{)503}$ R

8. $37\overline{)2105}$ R

9. $28\overline{)724}$ R

Name _____

Reteaching 95

Lesson 95

• Reciprocals

- To write a reciprocal, flip the fraction.

  Examples: $\frac{5}{6} \rightsquigarrow \frac{6}{5}$ $\frac{4}{3} \rightsquigarrow \frac{3}{4}$ $4 = \frac{4}{1} \rightsquigarrow \frac{1}{4}$

- The product of any number and its reciprocal always equals 1.

  Examples: $\frac{2}{3} \times \frac{3}{2} = \frac{6}{6} = 1$ $\frac{1}{2} \times \frac{2}{1} = \frac{2}{2} = 1$

Practice:

Write the reciprocal of each number. Leave improper fractions as improper fractions.

1. $\frac{3}{7} \rightsquigarrow$ ____ **2.** $\frac{1}{3} \rightsquigarrow$ ____ **3.** $\frac{2}{5} \rightsquigarrow$ ____

4. $\frac{4}{9} \rightsquigarrow$ ____ **5.** $\frac{7}{10} \rightsquigarrow$ ____ **6.** $4 \rightsquigarrow$ ____

7. $\frac{6}{7} \rightsquigarrow$ ____ **8.** $\frac{1}{8} \rightsquigarrow$ ____ **9.** $10 \rightsquigarrow$ ____

10. How many $\frac{5}{12}$s are in 1? (Use the reciprocal.) _____

11. Divide: $1 \div \frac{3}{5}$ (Use the reciprocal.) _____

12. Think of a fraction and write it down. Then write its reciprocal. Multiply the two fractions. What is the product?

____ × ____ =

↑ ↑ ↑

fraction reciprocal product

Name _____

• Using Reciprocals to Divide Fractions

- To use **reciprocals** to divide fractions:
  1. Change the $\div$ to a $\times$.
  2. Flip the second fraction to use the reciprocal.
  3. Cross cancel (if possible).
  4. Multiply across.

Example:

$$\frac{3}{1} \div \frac{3}{4} =$$

$$\frac{\overset{1}{3}}{1} \times \frac{4}{3_1} = \frac{4}{1} = 4$$

Practice:

Use the reciprocal to solve.

1. $\frac{1}{5} \div \frac{1}{4} =$

$\frac{1}{5} \times \frac{\quad}{\quad} =$ _____

2. $\frac{2}{7} \div \frac{2}{3} =$

$\frac{2}{7} \times \frac{\quad}{\quad} =$ _____

3. $\frac{2}{5} \div \frac{4}{7} =$

$\frac{2}{5} \times \frac{\quad}{\quad} =$ _____

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

$\frac{3}{2} \times \frac{\quad}{\quad} =$ _____

5. $\frac{4}{8} \div \frac{6}{9} =$

$\frac{4}{8} \times \frac{\quad}{\quad} =$ _____

6. $\frac{10}{3} \div \frac{2}{4} =$

$\frac{10}{3} \times \frac{\quad}{\quad} =$ _____

7. $4 \div \frac{3}{5} =$

$4 \times \frac{\quad}{\quad} =$ _____

8. $7 \div \frac{2}{3} =$

$7 \times \frac{\quad}{\quad} =$ _____

9. $9 \div \frac{1}{4} =$

$9 \times \frac{\quad}{\quad} =$ _____

10. How many $\frac{1}{6}$s are in $\frac{4}{5}$? $\frac{4}{5} \div \frac{\quad}{\quad} =$ _____

11. How many $\frac{4}{7}$s are in $\frac{2}{3}$? $\frac{2}{3} \div \frac{\quad}{\quad} =$ _____

Name _____

• Ratios

- A **ratio** is a way to describe a relationship between numbers. There are three ways to write ratios:

  a to b a:b $\frac{a}{b}$

  Example: There are four wheels on each car. What is the ratio of wheels to cars?

  4 to 1 4:1 $\frac{4}{1}$

- Write the ratio in the order given.
- Reduce a ratio as you would a fraction when possible.
- Leave ratios in fraction form, not as mixed numbers.

Example:

The ratio of red to blue marbles in a bag is 4 to 6.

Write "4 to 6" in fraction form.

We reduce ratios like fractions: $\frac{4 \div 2}{6 \div 2} = \frac{2}{3}$

So the ratio of red to blue marbles is $\frac{2}{3}$. For every two red marbles, there are 3 blue marbles.

Practice:

There are 32 puppies and 48 kittens at the adoption center.

1. What is the ratio of puppies to kittens?

$\frac{\text{puppies}}{\text{kittens}}$ ___ = ___ Reduce.

2. What is the ratio of kittens to puppies?

$\frac{\text{kittens}}{\text{puppies}}$ ___ = ___ Reduce but don't convert.

There were 15 appetizers and 35 entrées at the restaurant.

3. What is the ratio of appetizers to entrées?

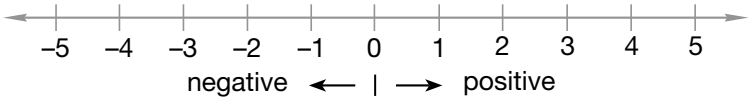
$\frac{\text{appetizers}}{\text{entrées}}$ ___ = ___ Reduce.

4. What is the ratio of entrées to appetizers?

$\frac{\text{entrées}}{\text{appetizers}}$ ___ = ___ Reduce but don't convert.

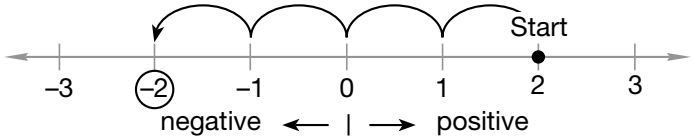
• Temperature

- A **thermometer** shows temperature on a scale, which is a kind of number line. **Fahrenheit** and **Celsius** are different temperature scales.
- Units on a temperature scale are called **degrees**.
- We can use a **number line** to understand **negative numbers** and **positive numbers**. Zero is neither negative nor positive.



- Positive numbers are to the right of (greater than) zero.
- Negative numbers are to the left of (less than) zero.
- To subtract using a number line:
  1. Start with the first number given.
  2. Count to the left the number of units to subtract.

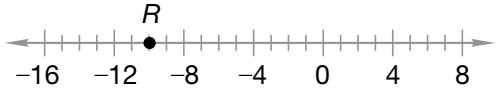
Example: $2 - 4 = -2$



Practice:

1. Put a dot at negative five. Label the point with the letter *M*.

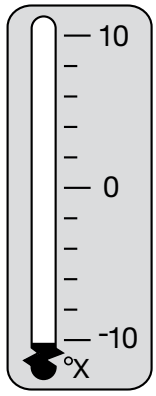
2. Point *R* represents what number on this number line? _____



3. Write the temperature that is 15 degrees below zero on the Fahrenheit scale.

Remember to write the units. _____

4. What temperature is shown on this thermometer? _____



5. Use compatible numbers to estimate the difference in temperature between 23°C and 4°C. _____

Name _____

Reteaching **99**

Lesson 99

• Adding and Subtracting Whole Numbers and Decimal Numbers

- Line up the decimal points.
- Use zeros as placeholders.
- Put a decimal point to the right of any whole number.

Example:

$3.1 + 4.35 + 7 =$

$$\begin{array}{r} 3.10 \\ 4.35 \\ +\ 7.00 \\ \hline 14.45 \end{array}$$

Practice:

Find each sum or difference.

1. $\begin{array}{r} 6.12 \\ +\ 5 \\ \hline \end{array}$ **2.** $\begin{array}{r} 8 \\ -\ 3.67 \\ \hline \end{array}$ **3.** $\begin{array}{r} 4.03 \\ +\ 1.94 \\ \hline \end{array}$ **4.** $\begin{array}{r} 2.59 \\ -\ 1 \\ \hline \end{array}$

5. $54 + 8.60 + 22.7 =$ _____

6. $15.06 - 12 =$ _____

7. $31.4 - 31 =$ _____

8. $12 + 1.02 =$ _____

9. Compare. $15.00 \bigcirc 15.0$

Name _____

• Simplifying Decimal Numbers

- Remove extra zeros to the left and right of the decimal point.
- Keep one zero in front of the decimal, if there are no other whole numbers.
- Do not remove zeros between other numerals.

Examples:

Ø3.03ØØ = 3.03
0.89ØØ = 0.89

Practice:

Simplify each decimal number.

1. 0.420 = _____ **2.** 1.200 = _____ **3.** 05.9010 = _____

4. 10.800 = _____ **5.** 08.9320 = _____ **6.** 7.000900 = _____

Simplify each answer.

7.
$$\begin{array}{r} 4.38 \\ +\ 3.62 \\ \hline \end{array}$$
= _____

8.
$$\begin{array}{r} 10.98 \\ -\ 8.88 \\ \hline \end{array}$$
= _____

9.
$$\begin{array}{r} 5.56 \\ +\ 3.34 \\ \hline \end{array}$$
= _____

10. Attach a zero to 3.05 without changing its value. _____

11. Attach a zero to 8 without changing its value. _____

12. Explain why attaching a zero at the end of a decimal number is unlike attaching a zero to the end of a whole number. See the example below.

3.0 → attach a zero → 3.00 3 → attach a zero → 30

_____

_____