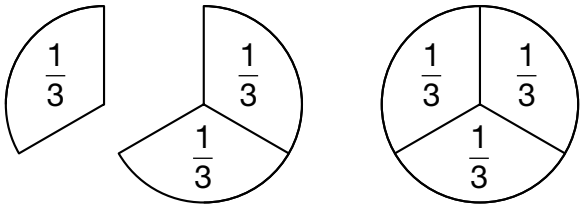
Name _____

• Adding and Subtracting Fractions with Common Denominators

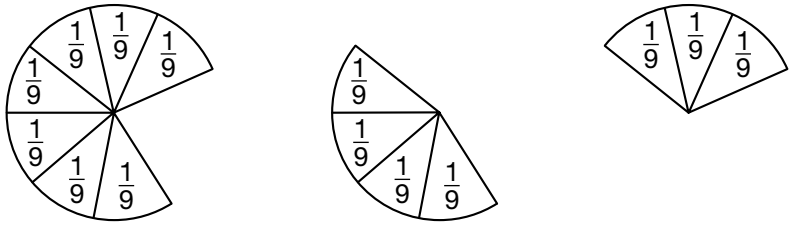
- The denominator does not change when you add or subtract fractions with the same denominator.

Example: $\frac{1}{3} + \frac{2}{3}$



$\frac{1}{3} + \frac{2}{3} = \frac{3}{3} = 1$ Add the numerators.
The denominator stays the same.

Example: $\frac{7}{9} - \frac{4}{9}$



$\frac{7}{9} - \frac{4}{9} = \frac{3}{9}$ Subtract the numerators.
The denominator stays the same.

Practice:

Add or subtract as indicated.

1. $\frac{1}{3} + \frac{1}{3} =$ _____

2. $\frac{1}{5} + \frac{3}{5} =$ _____

3. $\frac{6}{7} - \frac{3}{7} =$ _____

4. $\frac{4}{10} + \frac{3}{10} =$ _____

5. $2\frac{2}{6} + 3\frac{3}{6} =$ _____

6. $4\frac{4}{5} - 2\frac{2}{5} =$ _____

7. $\frac{1}{4} + \frac{1}{4} + 3\frac{1}{4} =$ _____

8. $\frac{2}{10} + \frac{2}{10} + 5\frac{3}{10} =$ _____

Name _____

Reteaching 42

Lesson 42

- **Short Division**
- **Divisibility by 3, 6, and 9**

Short Division

- Sometimes we can "shorten" the **division algorithm** (divide, multiply, subtract, bring down) by using mental math. When we do **short division**, instead of writing each step, we do some steps in our head.

Example: Divide 57 by 3 using short division.

$$3\overline{)5^{2}7}\quad 19$$

1. Divide 5 by 3 and write the 1.
2. Then multiply 3×1 and mentally subtract $5 - 3 = 2$.
3. Place a small 2 next to the 7 to make 27. Then, find $27 \div 3 = 9$. Write the 9 to complete the quotient, 19.

Divisibility by 3, 6, and 9

- To test for divisibility by 3, 6, and 9, add the digits:

564 $\quad 5 + 6 + 4 = 15$

Tests for Divisibility

A number is divisible by …	
3	if the sum of its digits is divisible by 3.
6	if the number is divisible by 2 and 3.
9	if the sum of its digits is divisible by 9.

Practice:

Use short division.

1. $6\overline{)425}$ **2.** $3\overline{)528}$ **3.** $9\overline{)642}$

4. $3\overline{)714}$ **5.** $6\overline{)239}$ **6.** $9\overline{)840}$

7. $9\overline{)915}$ **8.** $3\overline{)623}$ **9.** $6\overline{)178}$

Decide whether each of the following is divisible by 3, by 6, by 9, or by none of these numbers.

10. 1256 **11.** 2583 **12.** 875

_____ _____ _____

Name _____

• More Arithmetic with Mixed Numbers

- When writing quotients, sometimes we must show the remainder as a fraction.

$$6\overline{)10^{4}0}\ \text{R4} \longrightarrow 6\overline{)10^{4}0}\ 16\tfrac{4}{6}$$

(16 ← remainder; 6 ← divisor)

- Write the remainder over the divisor.
- To add or subtract whole numbers, fractions, and mixed numbers:
  1. Copy the problem vertically. Line up whole numbers over whole numbers and fractions over fractions.
  2. Add or subtract the fractions first.
  3. Add or subtract the whole numbers last.

$5 + 2\frac{1}{3} \longrightarrow$

$$\begin{array}{r} 5 \\ +\ 2\ \ \frac{1}{3} \\ \hline 7\ \ \frac{1}{3} \end{array}$$

$4\frac{2}{3} - \frac{1}{3} \longrightarrow$

$$\begin{array}{r} 4\ \ \frac{2}{3} \\ -\ \ \ \ \frac{1}{3} \\ \hline 4\ \ \frac{1}{3} \end{array}$$

Practice:

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

2. $5\frac{4}{5} - \frac{2}{5}$

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

4. $4\frac{1}{2} - 3$

Divide and write the quotient as a mixed number.

5. $3\overline{)16}$

6. $5\overline{)24}$

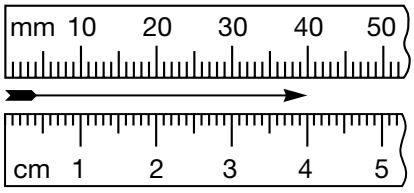
7. A rectangle is divided into fifths. Each fifth is what percent of the whole rectangle? (Divide 100% by 5 to find the percent for each fifth.) Remember to write the percent symbol.

_____

Name _____

• Measuring Lengths with a Ruler

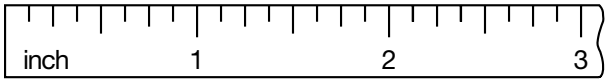
- Centimeters and millimeters are units of length in the **Metric System**.



- The arrow is 40 millimeters long. It is also 4 centimeters long.

1 cm = 10 mm

- Inches, feet, yards, and miles are units of length in the **U.S. Customary System**.
- This is an inch scale divided into eighths.



Practice:

Use a centimeter ruler to measure each segment in centimeters and then in millimeters.

1. _____ cm _____ mm

2. _____ cm _____ mm

3. _____ cm _____ mm

4. Measure the length of your desk to the nearest centimeter. _____ mm

5. Five centimeters is how many millimeters? _____ mm

6. How many millimeters is 9 centimeters? _____ mm

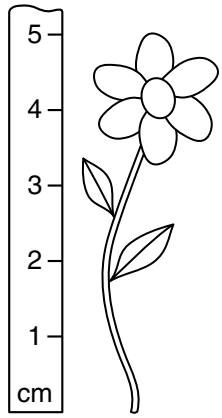
7. Write the abbreviations:

centimeter _____ millimeter _____

In problems 8–9, remember to write the units.

8. About how many millimeters tall is this flower? _____

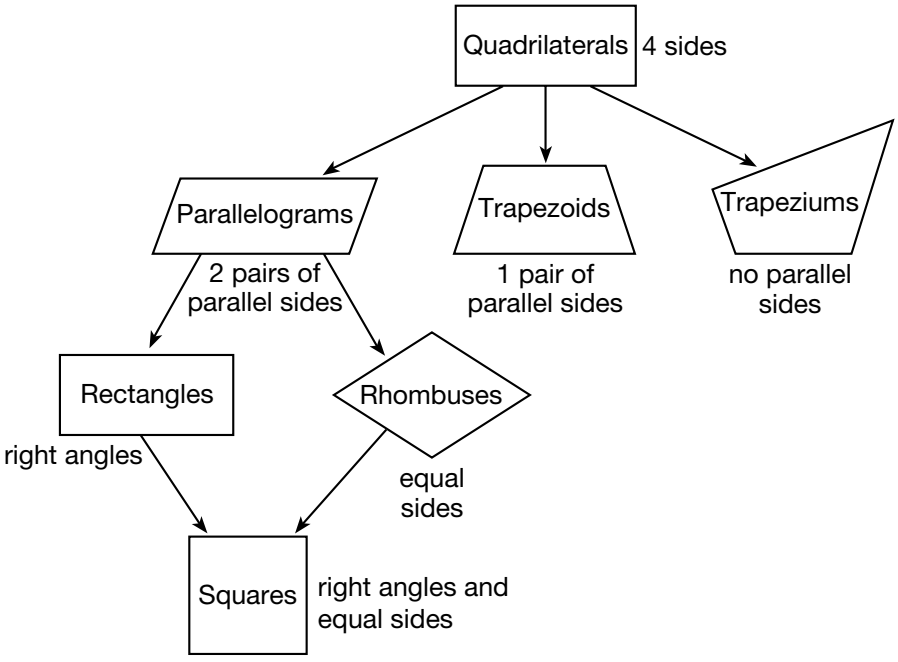
9. About how many centimeters tall is this flower? _____



• Classifying Quadrilaterals

- Quadrilaterals have four sides.
- Some quadrilaterals have special names.

Classification of Quadrilaterals



- A square is both a rectangle and a rhombus. It has four right angles and four congruent sides.

Practice:

The words parallelogram, trapezoid, trapezium, rectangle, rhombus, and square were used in the lesson to describe quadrilaterals. Describe each of the following quadrilaterals using these words.

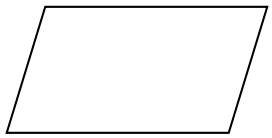
1. 

_____

2. 

_____

_____

3. 

_____

Name _____

Reteaching 46

Lesson 46

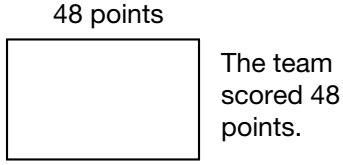
• Word Problems About a Fraction of a Group

- We can use a diagram to make word problems about a fraction of a group.

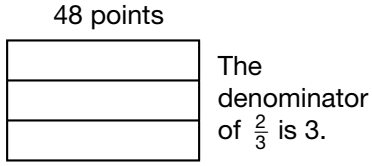
Example:

Casey scored $\frac{2}{3}$ of the team's 48 points. How many points did she score?

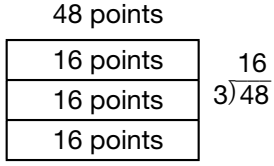
1. Draw a rectangle. This represents the total.



2. Divide the rectangle into the same number of parts as the denominator.

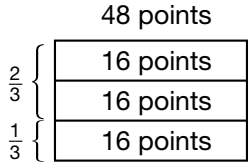


3. Divide the total by the denominator. Write the answer in each part.



4. Bracket the parts into fractions. Answer the question. Casey scored 32 points.

Casey scored $\frac{2}{3}$.

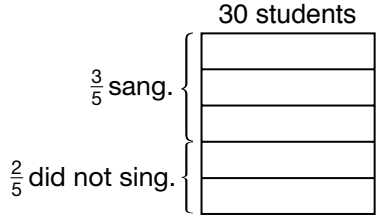


Practice:

Illustrate and solve each fraction story.

1. $\frac{3}{5}$ of the 30 students in the class sang in the choir. How many students sang in the choir? _____

5)30



2. How many eggs is $\frac{3}{4}$ of a dozen? _____

3. How many minutes is $\frac{2}{3}$ of an hour? _____

4. Five sixths of the 30 students walk to school. How many students walk to school? _____

Name _____

Reteaching 47

Lesson 47

• Simplifying Mixed Measures

- To change mixed measures to the same unit measure, you must first know an **equivalent measure**, such as the number of inches that equal one foot.

Example: Devon is 5 feet 1 inch tall. How many inches tall is Devon?

1 foot = 12 inches	1. To convert to inches, use the equivalent measure.
$5 \times 12 = 60$ $60 + 1 = 61$	2. Perform the operation.
61 inches	3. Write the measure with the correct unit label.

Devon is 61 inches tall.

Practice:

Remember to write the units.

1. Change 4 feet 5 inches to inches. 1 ft = _____ in.

(_____ × _____) + _____ = _____

2. Change 2 minutes 38 seconds to seconds. 1 min = _____ s

(_____ × _____) + _____ = _____

3. Change 3 hours 12 minutes to minutes. 1 hr = _____ min

(_____ × _____) + _____ = _____

4. Change 6 pounds 11 ounces to ounces. 1 lb = _____ oz

(_____ × _____) + _____ = _____

Name _____

Reteaching **48**

Lesson 48

• Reading and Writing Whole Numbers in Expanded Notation

- To write a number in expanded notation, name the place value of each digit except for zeros.

  $4267 = (4 \times 1000) + (2 \times 100) + (6 \times 10) + (7 \times 1)$

- When given a number written in expanded notation:
  1. Count the number of places in the first parentheses.
     $(2 \times \underline{1000}) + (8 \times 10) + (5 \times 1)$
  2. Draw digit lines for each place.
     ____ ____ ____ ____
  3. Fill in the digit lines. Use zeros for missing place values. Then write the number in standard form.
     2 0 8 5 = 2085

Practice:

Write in expanded notation.

1. 47 = (_____ × _____) + (_____ × _____)

2. 119 = _____

3. 5704 = _____

Write in standard form.

4. $(5 \times 1000) + (4 \times 100) + (8 \times 1)$ = ____ ____ ____ ____ = _____

5. $(7 \times 100) + (3 \times 10)$ = ____ ____ ____ = _____

6. $(9 \times 10{,}000) + (4 \times 1000) + (2 \times 1)$ =

____ ____, ____ ____ ____ = _____

7. $(3 \times 100{,}000) + (6 \times 1000) + (5 \times 10)$ =

____ ____ ____, ____ ____ ____ = _____

• Solving Multiple-Step Word Problems

- This is a two-step arithmetic problem:

  $8 - (6 - 5)$

- Just like arithmetic problems, some word problems take two steps.

Example:

Chun is 7 years older than Tracy. Tracy is 2 years older than Mei Lin. Mei Lin is 17 years old. How old is Chun?

Mei Lin → 17 years

Tracy (Mei Lin + 2) → 17 + 2 = 19 years

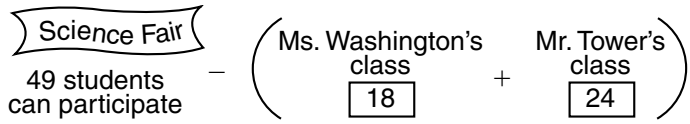
Chun (Tracy + 7) → 19 + 7 = 26 years

Chun is 26 years old.

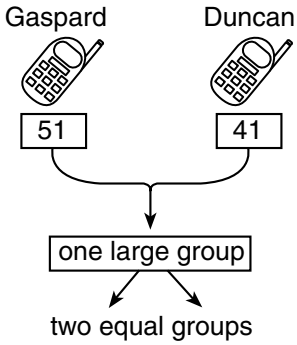
Practice:

Solve each two-step problem.

1. Two science classes were having a science fair. There is room for 49 participants. Ms. Washington's class has 18 participants. Mr. Tower's class has 24 participants. How many more students can participate?



2. Gaspard and Duncan collected cellular phones for a recycling project at school. Gaspard collected 51 cellular phones. Duncan collected 41 phones. If they put the phones in two equal groups, how many phones are in each group?



Name _____

Reteaching 50

Lesson 50

• Finding an Average

- To find an **average**:
  1. Add the numbers.
  2. Divide by the count of numbers.
- The answer must be between the smallest and largest numbers.

Practice:

Solve each two-step problem by combining and then forming equal groups.

1. There are five students on the student government. Their ages are 10, 10, 12, 12, and 11. What is the average age of the student government representatives?

$$\begin{array}{r} 10 \\ 10 \\ 12 \\ 12 \\ +\ 11 \\ \hline \end{array} \qquad)\overline{}$$

_____ years old

2. Mr. Tomuri asked Josh to rearrange the science books so they are in two equal stacks. There are 8 books in one stack and 12 books in the other stack. How many books will be in each stack after Josh rearranges the books?

_____ books

3. In three games the team scored 24 points, 27 points, and 36 points. The team scored an average of how many points per game?

_____ points (per game)