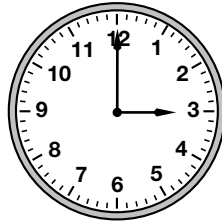
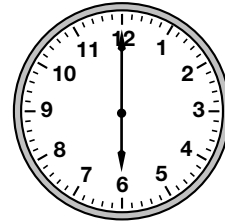


• **Angle Measures**

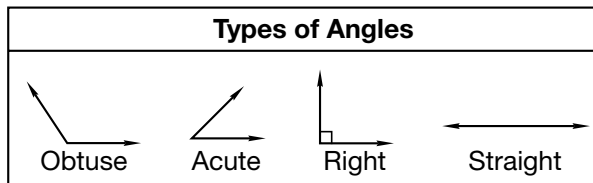
Angles	
Type	Measure
Right angle	90°
Obtuse angle	more than 90°, less than 180°
Acute angle	less than 90°
Straight angle	180°
Full circle	360°



right angle, 90°

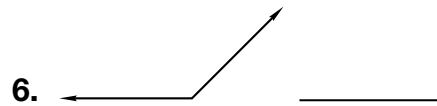
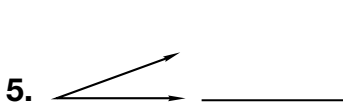
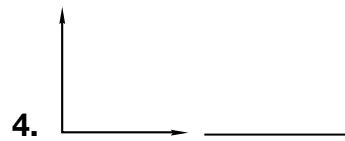
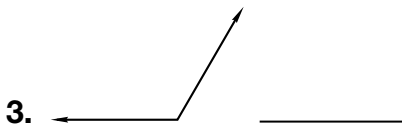
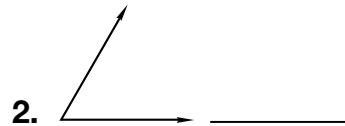
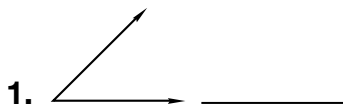


straight angle, 180°



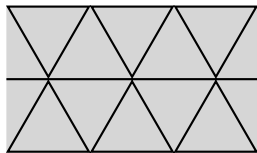
Practice:

Estimate the measure of each angle. Use a protractor to check your estimates. Remember to write the degree symbol.

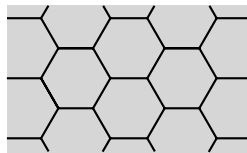


• Tessellations

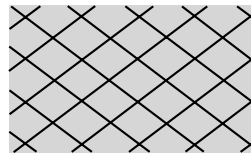
- A **tessellation**, also called a tiling, is the repeated use of shapes to fill a flat surface without gaps or overlaps.

Examples:

triangle



hexagon



quadrilateral

- Not all polygons tessellate (fill a flat surface), but every triangle and every quadrilateral can fill a flat surface.

Practice:

Create a tessellation of your own below. Remember to use all of the same shape.

- **Sales Tax**

- Find the total with **sales tax**. Then subtract to find the change back.

Example: Ty bought a pair of sneakers priced at \$43.99. The sales tax was \$2.76. Ty paid the clerk \$50.00. How much change should he get back?

Find the total with tax.

$$\begin{array}{r}
 \$43.99 \quad \text{price of the sneakers} \\
 + \$ 2.27 \quad \text{sales tax} \\
 \hline
 \$46.75 \quad \text{total cost}
 \end{array}$$

Subtract to find the change back.

$$\begin{array}{r}
 \overset{4}{\$} \overset{9}{\cancel{5}} \overset{9}{\cancel{0}} \overset{10}{0} \quad \text{amount paid} \\
 - \$ 46.75 \quad \text{total cost} \\
 \hline
 \$ 3.25 \quad \text{change}
 \end{array}$$

Practice:

Remember to write the dollar sign in money problems.

1. Cameron bought lunch at the mall for \$6.17. The total sales tax was 89¢. Altogether, how much did Cameron pay for his lunch?

$$\begin{array}{r}
 \$6.17 \\
 + \$0.89 \\
 \hline
 \$ \quad .
 \end{array}$$

Cameron spent _____ on his lunch.

2. Cicely bought two pairs of jeans for the beginning of school. Each pair was \$29.89. The total sales tax was \$4.03. How much money did Cicely use to buy her jeans?

$$\begin{array}{r}
 \$29.89 \\
 + \$29.89 \\
 \hline
 \$ \quad .
 \end{array}
 \quad
 \begin{array}{r}
 \$ \quad . \\
 + \$ 4.03 \\
 \hline
 \$ \quad .
 \end{array}$$

Cicely spent _____ on jeans.

3. If Cicely paid for her jeans with four \$20 bills, how much change would she receive?

$$\$20 \times 4 = \underline{\hspace{2cm}} \quad
 \begin{array}{r}
 \$ \quad . \\
 - \$ \quad . \\
 \hline
 \$ \quad .
 \end{array}$$

• Decimal Numbers to Thousandths

Place Values

hundred millions	ten millions	millions	,	hundred thousands	ten thousands	thousands	,	hundreds	tens	ones	.	decimal point	tenths	hundredths	thousandths
100,000,000	10,000,000	1,000,000		100,000	10,000	1,000		100	10	1			$\frac{1}{10}$	$\frac{1}{100}$	$\frac{1}{1000}$

Example: 13.783 is read “thirteen *and* seven hundred eighty-three thousandths”.

Practice:

Write each fraction or mixed number as a decimal number.

1. $\frac{617}{1,000}$ _____ . _____

2. $5\frac{346}{1,000}$ _____ . _____

3. $\frac{72}{100}$ _____ . _____

4. $2\frac{84}{1,000}$ _____ . _____

Write each decimal number as a fraction or mixed number. Then use words to name the numbers.

5. 0.349

Fraction: _____

Words: _____

6. 5.128

Mixed Number: _____

Words: _____

7. 0.004

Fraction: _____

Words: _____

8. 4.405

Mixed Number: _____

Words: _____

• Multiplying by 10, by 100, and by 1000

- If multiplying by 10, add one zero after the digits.
- If multiplying by 100, add two zeros after the digits.
- If multiplying by 1000, add three zeros after the digits.

Example:

$$45 \times 10 = \\ 450$$

- If multiplying money amounts, move the decimal point to the right and use zeros as placeholders. Remember, there must be exactly two decimal places in money amounts.

Examples:

$$38 \times 100 = 3800$$

$$\$5.83 \times 100 = \$583.00$$

$$57 \times 1000 = 57,000$$

$$67\text{¢} \times 1000 = \$670.00$$

Practice:

Multiply mentally. Remember to write the dollar sign in money problems.

1. $425 \times 10 =$ _____

2. $\$5.30 \times 10 =$ _____

3. $67\text{¢} \times 100 =$ _____

4. $\$3.75 \times 100 =$ _____

5. $6 \times 1000 =$ _____

6. $\$3.22 \times 1000 =$ _____

7. $54 \times 10 =$ _____

8. $418 \times 100 =$ _____

• Multiplying Multiples of 10 and 100

- To multiply round numbers mentally:
 1. Multiply the non-zero digits of the factors.
 2. Count the zeros in the ones places of the factors.
 3. Attach that number of zeros to the product of the digits.

Example: 40×70

1. Think, “four times seven equals 28”.
2. There is one zero in 40 plus one zero in 70, or two zeros total.
3. Attach two zeros to 28.

$$40 \times 70 = 2800$$

Practice:

Multiply mentally. Remember to write the dollar sign in money problems.

1. $70 \times 80 =$ _____

2. $\$5.00 \times 4 =$ _____

3. $60 \times 200 =$ _____

4. $\$3.00 \times 900 =$ _____

5. $6 \times 5000 =$ _____

6. $\$4.00 \times 3000 =$ _____

7. $50 \times 20 =$ _____

8. $400 \times 500 =$ _____

• Multiplying Two Two-Digit Numbers, Part 1

- Use a three-step process to multiply two two-digit numbers.

Example:

$$\begin{array}{r} 35 \\ \times 14 \\ \hline \end{array}$$

1. Multiply the top number by the ones digit in the bottom number (ignore the tens digit).

$$\begin{array}{r} 35 \\ \times 14 \\ \hline 140 \end{array}$$

2. On the next line use a zero as a placeholder in the ones place. Then, multiply the top number by the tens digit in the bottom number.

$$\begin{array}{r} 35 \\ \times 14 \\ \hline 140 \\ 350 \\ \hline \end{array}$$

3. Add the two lines.

$$\begin{array}{r} 35 \\ \times 14 \\ \hline 140 \\ + 350 \\ \hline 490 \end{array}$$

Practice:

Multiply.

1.

$$\begin{array}{r} 36 \\ \times 24 \\ \hline \\ + \quad \quad 0 \\ \hline \end{array}$$

2.

$$\begin{array}{r} 24 \\ \times 36 \\ \hline \\ + \quad \quad 0 \\ \hline \end{array}$$

3.

$$\begin{array}{r} 65 \\ \times 17 \\ \hline \\ + \quad \quad 0 \\ \hline \end{array}$$

4.

$$\begin{array}{r} 41 \\ \times 28 \\ \hline \\ + \quad \quad 0 \\ \hline \end{array}$$

• Remainders in Word Problems About Equal Groups

- Read word problems carefully to find the information you need to solve the problem.

Example: The line for juice had 75 people. Juice boxes came in packages of 7.

- How many full packages will be needed?
- How many more juice boxes are needed?

$\begin{array}{r} 10 \text{ R } 5 \\ 7 \overline{)75} \end{array}$	<p>10 full packages would have enough juice boxes for 70 people. 5 people would still need juice. So 11 packages are needed.</p>
--	--

Practice:

Mrs. Obije had 49 people enroll for an art class. Each art table can seat a group of 4 students.

- How many groups of four students will be in the art class? _____ $\overline{)49}$ R
- How many tables will not be full? _____
- How many people will be at that table? _____
- How many total tables will be needed? _____

Samir was having a barbecue at his house. He bought 80 bottles of water. Samir estimated that each of the 26 people he invited would drink about 3 bottles.

- How many people are able to have 3 bottles of water? _____ $\overline{)80}$ R
- How many bottles will be left over? _____
- If 10 of Samir's friends drank 4 bottles of water each, would everyone else be able to have 3? _____

• **Mixed Numbers and Improper Fractions**

• **Improper fractions** are numbers greater than or equal to one.

• Improper fractions can be converted to mixed numbers:

Improper (“top heavy”) fraction

Whole number and a fraction

$$\frac{11}{3} = 3\frac{2}{3}$$

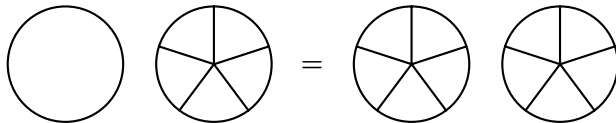


• Divide the circles into the number of parts shown in the **denominator**.

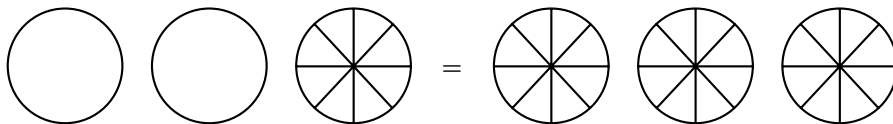
Practice:

Use a pencil to shade in the parts of each circle to represent the expression given.

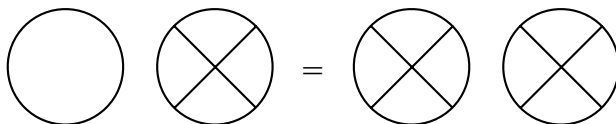
1. $1\frac{4}{5} = \frac{9}{5}$



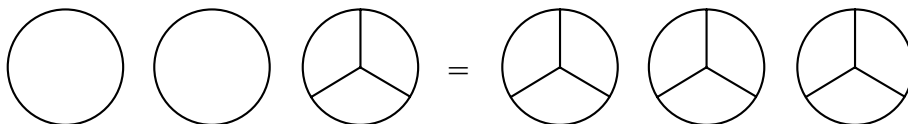
2. $2\frac{3}{8} = \frac{19}{8}$



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



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



• Multiplying Two Two-Digit Numbers, Part 2

- When multiplying two two-digit numbers:
 1. Indent the second line and use a zero as a placeholder.
 2. Use mental math to carry (unless the “carried number” is more than 5).
 3. If the “carried number” is more than 5, write it down.

Practice:

1.

	3	7
×	2	9
+		0

2.

	5	3
×	4	1
+		0

3.

	8	5
×	6	7
+		0

4.

	6	8
×	4	3
+		0

5.

	5	5
×	3	6
+		0

6.

	2	4
×	1	8
+		0