NAME _____ DATE _____ PERIOD _____

Lesson 1-1

Practice: Problem Solving

Solve.

1. **TABLES** Ms. Lopez wants to buy the dining room table that is 182 centimeters long. How many meters is the length of the table? _____

2. **RUNNING** Kathy ran 7.6 kilometers in a marathon. How many meters did Kathy run? _____

3. **SNOW** During the month of March, it snowed 96.2 centimeters at a ski resort in Colorado. How many decimeters did it snow? _____

4. **LONG JUMP** At the last track meet, Maya jumped 4.5 meters in the long jump. How many centimeters did Maya jump? _____

5. **PUZZLES** Lara received a puzzle for her birthday. The puzzle had a perimeter of 152 centimeters. What is the perimeter of the puzzle in millimeters? _____

6. **DRIVING** To get to the zoo from Rex's house, his mom must drive 128 kilometers. How many centimeters is it to the zoo? _____

7. **HOUSES** Mr. Elan is building the house shown in the picture. What will the height of the house be in decimeters? _____

8. **HEIGHT** Camila is 1,500 millimeters tall. What is Camila's height in meters? _____

9. **FABRIC** Louisa needs 609.6 millimeters of fabric for a craft project. She has 75 centimeters of fabric. How many centimeters of fabric will Louisa have left after she finishes her project? _____

10. **DRIVING** Martin and Brett took turns driving on a trip to the beach. Martin drove 91,000 meters. Brett drove 72 kilometers. How many total kilometers did Martin and Brett drive to the beach? _____

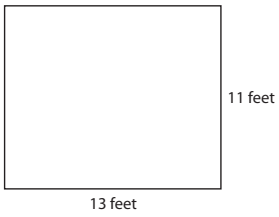
NAME _____ DATE _____ PERIOD _____

Lesson 1-2

Practice: Problem Solving

Solve.

1 **FENCE** The Anoki family is building a fence based on the picture below. What is the perimeter of the fence in yards? (Hint: the perimeter is found by adding the lengths of all the sides.) _____



2 **HEIGHT** Alonso was 54 inches tall when he was 10 years old. He grew 0.5 foot over the next three years. How many feet tall was Alonso at the age of 13? _____

3 **SCHOOL** Mallory's school is 2,640 feet from her house. How many miles does Mallory walk to school each day? _____

4 **FOOTBALL** Jonah threw a 22-yard pass for the winning touchdown at the first football game of the season. How many feet did Jonah throw the football? _____

5 **CONCERTS** The line to buy concert tickets became as long as 1 mile. How many inches long was the line? _____

6 **DECORATIONS** Sasha used 198 inches of crepe paper to decorate for her party. How many yards of crepe paper did Sasha use? _____

7 **RUNNING** The track team runs 2 miles at every practice. How many feet do they run? _____

8 **RIBBON** Mr. Franklin's class used the entire spool of ribbon to wrap the gifts for the toy drive. If a spool is equal to 200 yards, how many inches of ribbon did Mr. Franklin's class use? _____

9 **WOOD** On Saturday, the hardware store sold 171 feet of wood. How many yards of wood did the hardware store sell on Saturday? _____

NAME _____ DATE _____ PERIOD _____

Lesson 1-3

Practice: Problem Solving

Solve.

1 **CANDY** Molly ate a candy bar that was wrapped in the label shown below. How many milligrams of sugar did Molly eat? _____

Nutrition Facts	
Serving Size 1 bar	
Amount Per Serving	
Calories 130	
Total Fat 2.5g	4%
Saturated Fat 1.5g	8%
Cholesterol 15mg	5%
Sodium 170mg	6%
Total Carbohydrate 17 g	6%
Dietary Fiber 0g	0%
Sugars 16g	
Protein 10g	

2 **BOWLING** Sipatu uses a 7 kilogram bowling ball when he bowls. How many milligrams is the bowling ball Sipatu uses? _____

3 **MILK** Mr. Larson's tanker truck has 2.6 kiloliters of milk. How many liters of milk are in Mr. Larson's truck? _____

4 **CUPS** Ling serves drinks in cups that hold 400 milliliters of liquid. How many liters does each cup hold? _____

5 **PHOTOGRAPHY** Omar is developing film. He needs to use 0.85 liter of developing solution. How many milliliters of developing solution has he measured? _____

6 **CONCRETE** Kelly is making concrete and needs to add 12 liters of water to reach the correct consistency. How many kiloliters of water does Kelly need? _____

7 **GARDEN** Felix feeds his tomato plant with 1,320 milliliters of water each week. How many liters of water does Felix feed the plant each week? _____

8 **ANIMALS** At the zoo, Dakota feeds the giraffe 2,100,000 milligrams of food each day. How many kilograms of food does Dakota feed the giraffe each day? _____

9 **CHEMISTRY** Fatima needs to make a solution with 100 milligrams of sodium chloride and 390 milliliters of water. How many grams of sodium chloride does Fatima need? How many kiloliters of water does she need? _____

NAME _____ DATE _____ PERIOD _____

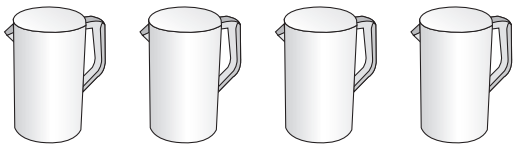
Lesson 1-4

Practice: Problem Solving

Solve.

1. **STRAWBERRIES** The grocery store received a delivery of 96 pints of strawberries. How many gallons of strawberries did the store receive? _____

2. **LEMONADE** Lydia is making lemonade for a lemonade stand. She wants to fill all 4 of the pitchers shown below. How many cups of lemonade will she need? _____



3. **NUTS** Kenyon bought 64 ounces of mixed nuts at the store. How many pounds of nuts did Kenyon buy? _____

4. **SOUP** Erin needs 4 cups of vegetable broth to make her favorite soup. How many gallons of broth does she need? _____

5. **GASOLINE** Ms. Harada poured an entire 3-gallon can of gasoline into her lawn mower. How many fluid ounces of gasoline did Ms. Harada put in the lawn mower? _____

6. **DOGS** At the veternarian's office, Sharon's dog's weight is found to be 10 pounds. How many ounces does Sharon's dog weigh? _____

7. **ANIMALS** Casandra gives 15 gallons of water to the bears at the zoo each day. How many quarts of water does Casandra give the bears each day? _____

8. **GRAVEL** Brian's truck can hold up to 6,000 pounds of gravel. How many tons of gravel it hold? _____

9. **COOKOUT** Emmett bought 80 ounces of ground beef for a cookout. How many pounds of ground beef did Emmett buy? _____

10. **BRIDGES** Samir designed a bridge that will require 20 tons of steel. How many pounds of steel will the bridge require? _____

NAME _____ DATE _____ PERIOD _____

Lesson 1-5

Practice: Problem Solving

Solve.

1. **AGE** Vincent's baby sister is 14 weeks old. How many days old is Vincent's sister? _____

2. **PUZZLES** It took Shandra 4200 seconds to complete the crossword puzzle from Sunday's newspaper. How many minutes did it take Shandra to finish the crossword puzzle? _____

3. **TEMPERATURE** The thermometer outside Garcia's house is shown. What is the temperature outside Garcia's house in degrees Fahrenheit? _____

4. **VOLUNTEERING** Koto volunteered at the hospital for 9 hours last week. How many minutes did Koto volunteer at the hospital last week? _____

5. **VACATION** Pilar spent 336 hours on vacation with her family. How many weeks did she spend on vacation? _____

6. **TEETH** Juan's Dentist says Juan should brush his teeth for 2 minutes twice a day. How many seconds should Juan spend brushing his teeth each day? _____

7. **HOCKEY** Last week's hockey game went 6 minutes into overtime. According to the scoreboard, how many hours was the game in overtime? _____

8. **TURKEY** The temperature of a cooked turkey is 158°F. What is the temperature of the turkey in degrees Celsius? _____

9. **GARDEN** Elan planted seeds that took exactly 6 days to sprout. How many hours did it take for the seeds to sprout? _____

NAME _____ DATE _____ PERIOD _____

Lesson 1-6

Practice: Problem Solving

Solve.

1. **T-SHIRTS** Doba is making t-shirts to sell at a craft fair. She wants to make $1,500 with 200 T-shirts. Assuming she sells all of the T-shirts, how much does she need to charge for each T-shirt in order to make her desired profit? _____

2. **CONTEST** Taro was able to eat 32 hot dogs in 4 minutes in a hot dog eating contest. How many hot dogs did he eat per minute? _____

3. **FOOTBALL** Rey ran a total of 810 yards in 9 football games. How many yards did he run per game? _____

4. **SAILING** A sailboat's path is 42 miles long. It takes 6 hours for the boat to complete the path. What was the unit rate of the boat's speed? _____

5. **FIELD TRIP** For a fieldtrip, the sixth grade uses 5 school busses. There are 260 students in the sixth grade and they are divided equally among the buses. What is the unit rate of students per bus? _____

6. **ASSEMBLY LINE** Tamika is designing an assembly line that will produce 4,000 parts during an 8 hour shift. What will be the production rate of the assembly line? _____

7. **COOKIES** Hiroko makes 75 cookies in 5 batches. How many cookies were in each batch? _____

8. **FITNESS** Benito marks on his calendar the days he goes to the gym. At what rate does Benito go to the gym per week? _____

October						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
7						
14						
21						
28	29	30	31			

9. **AIRPORT** At the airport, 105 planes land in 3 hours. What is the unit rate of planes landing per hour? _____

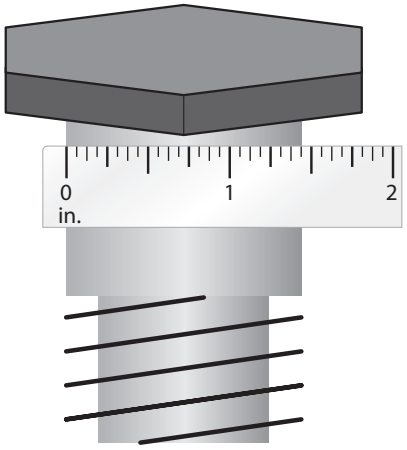
NAME _____ DATE _____ PERIOD _____

Lesson 2-1

Practice: Problem Solving

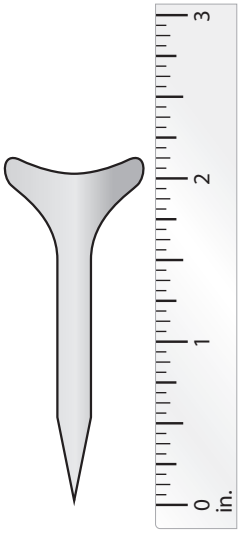
Solve.

1 **CONSTRUCTION** Haro needs to use this size hex bolt for the bench seats of a picnic table. What is the width of the hex bolt to the nearest $\frac{1}{16}$-inch?



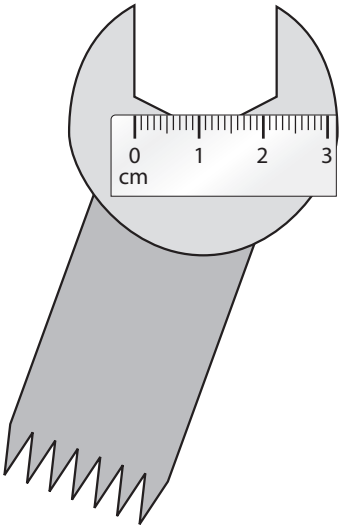
_____

2 **GOLF** A standard golf tee is shown below. What is the height of the tee to the nearest $\frac{1}{8}$-inch?



_____

3 **TOOLS** Luisa ordered a metric wrench set for her father's birthday. The largest wrench in the set is shown. What is the size of this wrench to the nearest millimeter?



_____

NAME _____ DATE _____ PERIOD _____

Lesson 2-2

Practice: Problem Solving

Solve.

1 **LANDSCAPING** Hugo is creating a flower bed in the shape of a rectangle. It has a length of 14 feet and a width of 8 feet. He would like to put a border around the edge. How many feet of border should Hugo purchase? _____

2 **CRAFTS** Leon put his school photo in an unfinished frame which had a width of 4.5 inches and a length of 6 inches. To decorate the frame, he glued ribbon around the edges. How much ribbon did Leon use for the frame? _____

3 **MOVIES** A large movie screen at a multiplex is 12 meters wide and 5 meters tall. What is the perimeter of this movie screen? _____

4 **INTERIOR DESIGN** Jolene sewed a table runner to use for the holidays. The table runner was 72 inches long and 15 inches wide. What is the perimeter of the table runner? _____

5 **BASKETBALL** A basketball court is shaped like a rectangle with a length of 94 feet and a width of 50 feet. What is the perimeter of the court? _____

6 **INTERIOR DESIGN** Kaya purchased a coffee table whose six sides are 50 centimeters each. She wants to put a strip of padding around the edge to child-proof it for her toddler. How many centimeters of padding does Kaya need? _____

7 **ART** Olivia created an abstract painting on a square canvas measuring 1.75 meters on each side. What is the perimeter of Olivia's painting? _____

8 **CALENDAR** Kim is marking her birthday on the calendar by gluing ribbon around that day. The date box is 2 centimeters by 3 centimeters. How much ribbon will Kim need to mark her birthday? _____

NAME _____ DATE _____ PERIOD _____

Lesson 2-3

Practice: Problem Solving

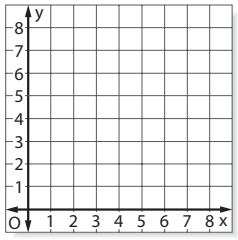
Solve.

1. **GEOMETRY** What is the area of a rectangle that has sides of 6 units and 9 units? _____

2. **GAMES** Keisha and Halley are playing a memory game. The cards are laid out in a rectangular pattern, 4 cards by 6 cards. How many cards make up the game area? _____

3. **CONSTRUCTION** The kitchen in Alicia's home has a wall that is 12 feet long and 8 feet tall. What is the area of this wall? _____

4. **GEOMETRY** Mr. Valez asked his students to find the area of the rectangle formed by the points (2, 2), (2, 6), (9, 6), and (9, 2). Darnell correctly plotted the points, drew the rectangle, and found the area. What did Darnell's paper look like?



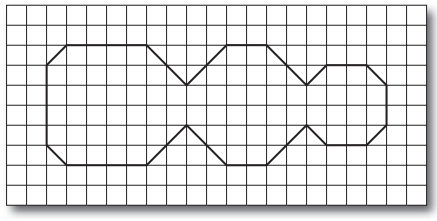
5. **LANDSCAPING** Mrs. Kincaid has hired a crew to place squares of sod in her front yard. The crew can fit 20 squares along the width of the yard and 35 squares along the length of the yard. How many squares of sod will fit in Mrs. Kincaid's yard? _____

6. **RUGBY** The largest size a rugby field may be is 70 meters by 100 meters. What is the maximum area of a rugby field? _____

7. **GEOMETRY** What is the area of a square that has sides 9 units long? _____

8. **COOKING** Fidel is cooking brownies. The pan is a rectangle measuring 8 inches on one side and 11 inches on the other side. What is the area of the pan? _____

9. **CONSTRUCTION** Brandon wants to create a snowman-shaped yard sign for winter. He began by drawing a scale model on centimeter grid paper. What is the area of his drawing? _____



NAME _____ DATE _____ PERIOD _____

Lesson 2-4

Practice: Problem Solving

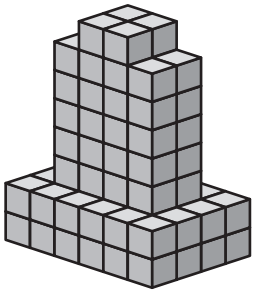
Solve.

1. **GEOMETRY** What is the volume of a rectangular prism that has a length of 4 meters, a width of 6 meters, and a height of 5 meters? _____

2. **APPLIANCES** The size of an appliance is determined by the volume of its interior space. What is the size of a microwave oven with a width of 22 inches, height of 10 inches, and depth of 13 inches? _____

3. **MODELS** Valerie's father built her a doll house that is 40 inches long, 10 inches wide, and 30 inches tall. What is the volume of Valerie's doll house? _____

4. **TOYS** Macaro is playing with building blocks. He made the structure shown below. How many blocks are in Macaro's structure? _____



5. **PACKAGING** A package is 6 inches by 6 inches by 8 inches. What is the volume of the package? _____

6. **RECREATION** What is the volume of an Olympic size pool which has a length of 25 meters, a width of 50 meters and a depth of 2 meters? _____

7. **GEOMETRY** What is the volume of a cube with sides of length 8 feet? _____

NAME _____ DATE _____ PERIOD _____

Lesson 3-1

Practice: Problem Solving

Solve.

1. **POSTERS** Mr. Lopez asked his students to create posters for their final projects. The poster boards measured 51 centimeters by 76 centimeters. What was the area of each poster board? _____

2. **PHOTOGRAPHY** Jane and her brother posed for a formal portrait. She will use the 11 in. by 14 in. framed portrait as a gift for her grandmother. What is the area of Jane's framed portrait? _____

3. **CONSTRUCTION** The opening of a typical doorway is 3 feet wide and 7 feet tall. What is the area of the opening of a typical doorway? _____

4. **TABLE CLOTHS** Tom purchased a table cloth for his rectangular dining room table. The table cloth measures 60 inches by 102 inches. What is the area of the tablecloth? _____

5. **GOLF** The fairway of a golf course is rectangular in shape. Its width is 22 yards and its length is 280 yards. What is the area of the fairway? _____

6. **AIRPORT** A small airport has a runway that is 900 meters long and 75 meters wide. What is the area of the runway? _____

7. **CONSTRUCTION** Malik is building an additional 12 ft. by 16 ft. bedroom onto his house. What is the area of the new bedroom? _____

8. **BILLIARDS** The surface of a billiards table is 44 inches wide and 88 inches long. What is the area of the surface of the billiards table? _____

9. **COUNTERTOP** A new kitchen countertop has dimensions of 244 cm by 76 cm. What is the area of this countertop? _____

10. **NOTE CARDS** Simon has an oral report for biology class. He made several notes on note cards measuring 3 inches by 5 inches. What is the area of each note card? _____

NAME _____ DATE _____ PERIOD _____

Lesson 3-2

Practice: Problem Solving

Solve.

1. **PICTURES** While on vacation, Luke bought a wall hanging in the shape of a parallelogram with a base of 18 in and a height of 24 in. What is the area of the wall hanging? _____

2. **GEOMETRY** What is the area of a parallelogram with a base of 11 meters and a height of 8 meters? _____

3. **STATES** Nodin is creating a flower bed in the shape of a parallelogram. The parallelogram is 5 yards long and 2 yards wide. What is the area of the flower bed? _____

4. **GEOGRAPHY** On the map, the shape of Tennessee is similar to a parallelogram. Approximate the area of Tennessee by using the formula for the area of a parallelogram if the base of the state is about 385 miles and the height of the state is about 110 miles. _____

5. **SNAKES** Many snakes have scales shaped like tiny parallelograms. If a snake has a scale with a base length of 3 millimeters and a height of 2 millimeters, what is the area of that scale? _____

6. **BANNER** For a friend's 30^{th} birthday party, Dario made a banner in the shape of a parallelogram. It had a base of 8 feet and a height of 1 foot. What is the area of the banner? _____

7. **SCRAPBOOKING** In her scrapbooking workshop, Lindsey learned to cut pictures into unusual shapes for a more dramatic effect. She cut one picture into a parallelogram with a base of 4 inches and a height of 5 inches. What is the area of the picture? _____

8. **GEOMETRY** A parallelogram has a base of 12 centimeters and a height of 9 centimeters. What is the area of the parallelogram? _____

NAME _____ DATE _____ PERIOD _____

Lesson 3-3

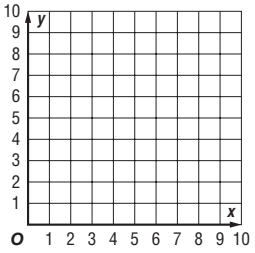
Practice: Problem Solving

Solve.

1 **SIGNS** A yield sign is in the shape of an equilateral triangle (a triangle with three equal sides). What is the area of this yield sign if it has a base of 750 mm and a height of 650 mm? _____

2 **LOGOS** A company's logo is the shape of a right triangle. The legs of the logo are each 2 yards long. What is the area of the logo? _____

3 **GRAPHING** Mrs. Simmons gave her students the points (2, 4), (9, 10), and (7, 4). She asked the students to graph these points and find the area enclosed by them. What is the correct answer? _____



4 **SCRAPBOOKING** Eva is decorating a page in her scrapbook. She took a rectangle, measuring 6 centimeters by 9 centimeters, and cut it in half along its diagonal to make 2 triangles. What is the area of each triangle? _____

5 **BILLIARDS** A 15-ball rack, used for playing billiards, has the shape of an equilateral triangle. The sides of the rack measure 14 inches and the height of the rack measures 12 inches. What is the area of the billiards rack? _____

6 **DRAWING** Kyle drew a triangle on his paper. He then measured two sides and found that the base had a length of 6 cm and the height of the triangle was 11 cm. What is the area of the triangle that Kyle drew? _____

NAME _____ DATE _____ PERIOD _____

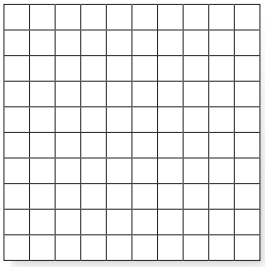
Lesson 3-4

Practice: Problem Solving

Solve.

1. **PANELING** A practice room in a school music department is the shape of a cube. Each wall has length 8 feet. Sound proof panels must be placed on all four walls, the floor, and the ceiling of the room. How much paneling will the room require?

2. **COLORS** Gregory is helping his brother learn the names of colors. He makes a color cube with a different color on each side. If each side measures 2 inches, what is the surface area of the cube? Draw a net for the number cube.



3. **GIFTS** Kenyi bought a birthday present for her friend. She placed it in a box, which was a rectangular prism with dimensions 30 centimeters by 30 centimeters by 5 centimeters. She then wrapped the present with paper. How much wrapping paper did she need?

4. **PAINTING** Nalin has converted his garage into a den. When decorating the room, Nalin decided to paint all the surfaces, including the floor and ceiling, using different shades of blue. The dimensions of the room are 22 feet wide, 20 feet long, and 9 feet high. What surface area did he paint?

5. **GEOMETRY** A number cube has sides of length 3 centimeters. What is the surface area of the number cube?

6. **CHEESE** A block of cheese has dimensions 3 cm $\times$10 cm $\times$15 cm. After cutting the block of cheese, the grocer must wrap it in plastic. What is the least amount of plastic wrap the grocer needs to wrap the block of cheese?

7. **RACQUETBALL** When playing racquetball, the entire surface area of the room is used. A racquetball court has a width of 20 feet, a length of 40 feet, and a height of 20 feet. What is the total surface area of the racquetball court?

NAME _____ DATE _____ PERIOD _____

Lesson 3-5

Practice: Problem Solving

Solve.

1. **TOYS** Lina has a toy box in her room. The box is 4 feet long, 2 feet wide, and 3 feet tall. What is the volume of the toy box? _____

2. **CEREAL** A cereal box has a length of 20 centimeters, a width of 4 centimeters, and a height of 30 centimeters. What is the volume of the cereal box? _____

3. **MOVING TRUCK** The Morris family is moving. To transport some of their belongings to the new house, they rent a moving truck 5 feet wide, 8 feet long, and 10 feet tall. What is the volume of the truck? _____

4. **CLOSET** Robin has a large closet in her bedroom. The closet measures 2 feet by 10 feet, and it is 8 feet tall. What is the volume of Robin's closet? _____

5. **MUSIC BOX** Kenji collects music boxes. Her favorite is one with a length of 3.5 inches, a width of 3.5 inches, and a height of 4 inches. What is the volume of Kenji's favorite music box? _____

6. **AQUARIUM** The Batista family has pet fish in a medium-sized aquarium with dimensions of 62 centimeters long, 31 centimeters wide, and 31 centimeters high. What is the volume of their aquarium? _____

7. **SAND BOX** Scott is playing in his sandbox. He digs a rectangular hole that measures 5 inches wide, 11 inches long, and 1 inch deep. What is the volume of the hole? _____

8. **GEOMETRY** A number cube measures 55 millimeters on each side. What is the volume of the cube? _____

9. **TRASH** A city provides commercial trash bins in several sizes. One common trash bin measures 15.5 feet in length, 8 feet in width, and 6.5 feet in height. What is the volume of such a trash bin? _____

NAME _____ DATE _____ PERIOD _____

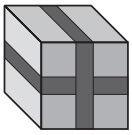
Lesson 4-1

Practice: Problem Solving

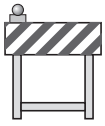
Solve.

1 **CELL PHONES** Zina's cell phone shows a full signal. What type of lines is used to indicate the signal? _____

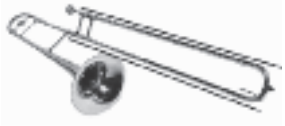
2 **GIFTS** Suki wrapped a birthday present for her sister with red ribbon. What type of lines does the ribbon form? _____



3 **SAFETY** Examine the traffic barrier. What type of lines are painted on the barrier? _____



4 **INSTRUMENT** Felipe plays the trombone in the school orchestra. What type of lines do the upper and lower bars of the trombone's slide form? _____



5 **ALPHABET** Consider the following letters of the alphabet:

A E F H L N T V X Y Z

Which letters contain a pair of parallel lines? _____

6 **ALPHABET** Consider the following letters of the alphabet:

A E F H L N T V X Y Z

Which letters contain a pair of perpendicular lines? _____

NAME _____ DATE _____ PERIOD _____

Lesson 4-2

Practice: Problem Solving

Solve.

1 **SIGNS** What type of angle is shown on this sign?

_____

2 **ALPHABET** Consider these letters of the alphabet. Which letters have a right angle?

A E F H L N T V X Y Z

_____

3 **ALPHABET** Consider these letters of the alphabet. Which letters have an acute angle?

A E F H L N T V X Y Z

_____

4 **ALPHABET** Consider these letters of the alphabet. Which letters have an obtuse angle?

A E F H L N T V X Y Z

_____

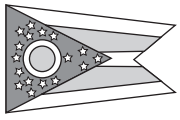
5 **MAIL** When raising the flag on her mailbox, Annie noticed that the flag moved along an angle. What type of angle is formed with the raising of the mailbox flag?

_____

6 **FURNITURE** Marlene placed this lounge chair on her patio. What type of angle is formed by the seat and back of the lounge chair?

_____

7 **FLAGS** The state flag of Ohio is shown. It is the only state flag which is not a rectangle. What type of angle is formed at the end of the Ohio flag?



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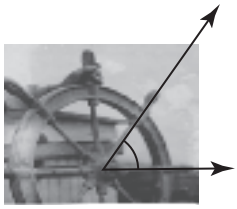
8 **BOATING** A boat's steering wheel is shown. What is the measure of the highlighted angle on the wheel?



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NAME _____ DATE _____ PERIOD _____

Lesson 4-3

Practice: Problem Solving

Solve.

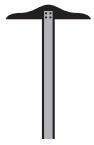
1 **INSTRUMENTS** A harp is a stringed instrument that may come in many sizes, but is generally the same shape. Classify the triangle by its angles.

_____

2 **FLAGS** The state flag of Texas is shown. Classify the quadrilaterals formed by the white and red sections of the flag.

_____

3 **ARCHITECTURE** Architects often use a T-square, shown here, to draw lines on a drafting table. The "T" part of its name comes from its design, which looks like the letter T. Explain how this tool can be used to draw a square.



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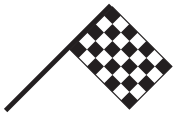
4 **STATES** Many states have geometric shapes. Wyoming is shown on the map. Classify the shape of this state with all the names that apply.

_____
_____
_____

5 **FLOOR TILES** Alonso is installing tile in his kitchen. He is using tiles shaped like the one below. Classify the shape of this tile.

_____

6 **RACING** An auto race is often ended with the waving of a checkered flag. What type of quadrilateral is found on the checkered flag?



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7 **BOXES** Erina hung a suggestion box in the school's cafeteria. What type of quadrilateral does the side of the suggestion box form?

_____

8 **CONSTRUCTION** Caroline's house is being built. She notices the framework of roof is a triangle. Classified by its sides, what type of triangle does the roof form?

_____

NAME _____ DATE _____ PERIOD _____

Lesson 4-4

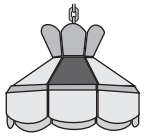
Practice: Problem Solving

Solve.

1 **TOOLS** Architects use many tools to aid them in designing roads and structures. One of these is a drafting triangle which has angles that measure 90° and 60°. What is the measure of the third angle of this drafting triangle?

_____

2 **LIGHTING** A light fixture is made of glass cut in various shapes, one of which is a trapezoid. In this trapezoid, the acute angles are equal and the obtuse angles are equal. If one of the obtuse angles is 105°, what is the measure of each of the acute angles?



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3 **DRAWING** Tiffany drew a star that has triangular points. She found that the measure of each angle at the star's points is 38°. If the triangle is isosceles, what is the measure of each of the other angles in this triangle?

_____

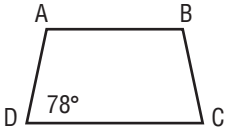
4 **SHOPPING** The sides of a shopping cart in a grocery are trapezoids. What is the measure of the missing angle?

_____

5 **GEOMETRY** A right triangle has one acute angle that measures 24°. What is the measure of the other acute angle?

_____

6 **CLEANING** While cleaning the house, Sandra's mom notices that the dustpan is a trapezoid. The non-parallel sides of the trapezoid are equal, so the angles on each side are equal. What is the measure of each of the missing angles?



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7 **LADDERS** Ivan is painting the ceiling in his living room. He is standing on a ladder that opens at an angle of 40°. What angle is formed where the floor meets the leg of the ladder? HINT: The ladder forms an isosceles triangle.

_____

NAME _____ DATE _____ PERIOD _____

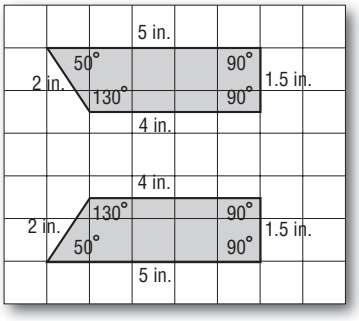
Lesson 4-5

Practice: Problem Solving

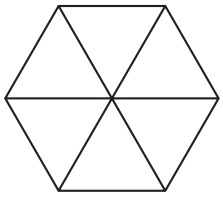
Solve.

1 **CABINETRY** Alfred is building a cabinet that has two sides, a back, a top and a bottom. Which parts would you expect to be congruent?

2 **HOBBIES** Simla is building a model airplane. She needs to cut out the two wings shown below. Are the wings congruent?



3 **FISH TANK** Jocelyn just bought a hexagonal fish tank. She realized that the base of the tank can be divided into 6 triangles. Are the triangles congruent?



4 **PAINTING** Amy is painting two opposite walls in her room. One wall is 12 feet long and 8 feet high. If the opposite wall is congruent to the first wall, what are the measurements of the opposite wall?

5 **SHIPS** Hao was wondering if two of the sails on his ship are congruent. The first sail has angles of 40°, 66°, and 74°, and sides of length 5 feet, 4 feet, and 6 feet. The second sail has angles of 40°, 66°, and 74°, and sides of length 10 feet, 8 feet, and 12 feet. Are the sails congruent? Explain.

NAME _____ DATE _____ PERIOD _____

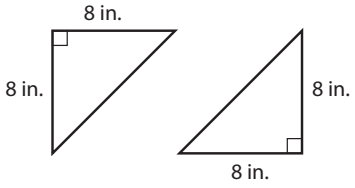
Lesson 4-6

Practice: Problem Solving

Solve to the nearest tenth.

1 **ORAGAMI** Dan is doing origami. He has a square sheet of green paper that is 8 inches long and 8 inches wide. He cuts the paper in half diagonally to make 2 triangles. How long is the hypotenuse of each triangle?

_____



2 **ANTENNAS** Amalia wants to put an antenna on the roof of her house in order to access a wireless network. The vertical distance from the top of the antenna to the base of the house is 50 feet. Amalia wants to be able to use the network at a horizontal distance of 120 feet from base of the house. If a right triangle is created connecting the antenna, the backyard distance, and the base of the house, how long would the hypotenuse be?

_____

3 **DRIVING** To get to the pool, Carlos usually drives north, then east. One day, Carlos discovered he can walk straight to the pool if he goes through the woods. Look at the map below. How far does Carlos have to walk through the woods to get to the pool?

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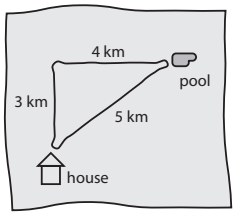

4 **MAILBOX** Sarit is building a mailbox. He needs to make sure that the mailbox is properly supported on the post. Using Sarit's diagram below, determine the length of the support.

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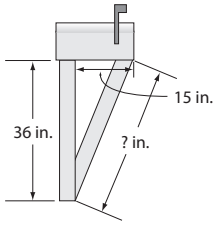


NAME _____ DATE _____ PERIOD _____

Lesson 4-7

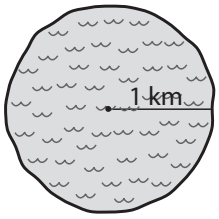
Practice: Problem Solving

Solve.

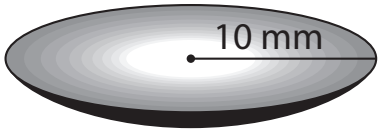
1 **HATS** Yori wants to put a piece of fleece around her hat. The diameter of the hat is 7 inches. What length of ribbon does Yori need to go around the hat? _____

2 **TABLES** Luke is painting the top of a large circular table. The diameter of the table is 6 feet. What is the area of the table? _____

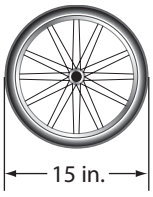
3 **EXERCISE** Fiona jogs around the lake every morning. How far does she jog each morning? _____



4 **BIOLOGY** Omar is transferring cells to this Petri dish. What is the area of the Petri dish? _____



5 **TIRES** Nestor can find the circumference of the wheel to calculate how far it moves in one rotation. How far can this wheel move in one rotation? _____



6 **PIZZA** Lani made a pizza with a diameter of 12 inches. What is its area? _____

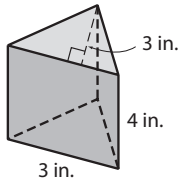
NAME _____ DATE _____ PERIOD _____

Lesson 4-8

Practice: Problem Solving

Solve.

1 **PRISMS** Ms. Turner has triangular prisms in her classroom to show her students how different prisms refract light. What is the volume of the prism shown below?



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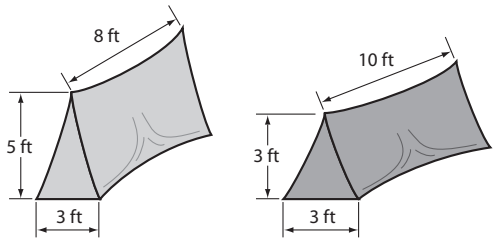
2 **TENTS** Alvar wants to buy the biggest tent that he can for a camping trip. There are two tents for sale at the store. Which tent has the larger volume? Explain.



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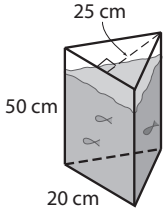
3 **FISH TANK** Nigan just bought a fish tank with a triangular base. What is the volume of the fish tank?



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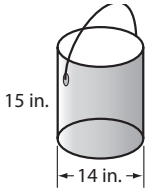
4 **CAR WASH** Sanjay is going to wash his dad's car. How many cubic inches of water can Sanjay put in the bucket?



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5 **BIOLOGY** Diego is designing a bioreactor to grow cells. It is cylinder with a height of 30 centimeters and a radius of 12 centimeters. What is volume of Diego's bioreactor?

_____