PRE ALGEBRA – PA CORE – COURSE 2

STUDENT WORKBOOK

Unit 4 GEOMETRY

Before

After

4	Geometry	PURPLE	GREEN	RED
7.1	Classify Angles			
7.2	Complementary and Supplementary Angles			
7.3	Triangles			
7.4	Scale Drawings			
7.5	Draw Three Dimensional Figures			
7.6	Cross Sections			
8.1	Circumference			
8.2	Area of Circles			
8.3	Area of Composite Figures			
8.4	Volume of Prisms			
8.6	Surface Area of Prisms			
8.8	Volume and Surface Area of Composite Figures			

STUDY ISLAND TOPICS

Scale Drawing
Triangles
Three Dimensional Figures
Angles
Circles
Area, Surface Area, and Volume

Name: _____ Period _____

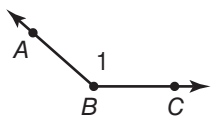
NAME _____ DATE _____ PERIOD _____

Lesson 1 Skills Practice

Classify Angles

Name each angle in four ways. Then classify the angle as *acute*, *right*, *obtuse*, or *straight*.

1.



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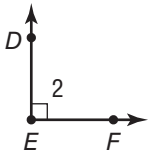

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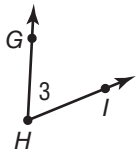

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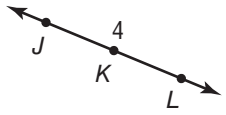

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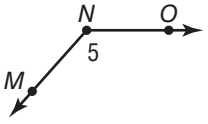

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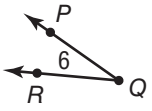
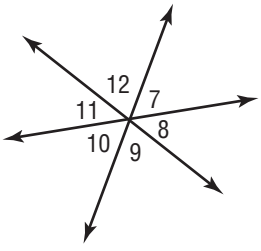


Refer to the diagram at the right. Identify each angle pair as *adjacent*, *vertical*, or *neither*.



7. ∠7 and ∠12

8. ∠8 and ∠11

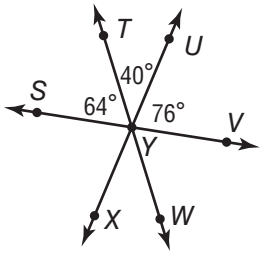
9. ∠7 and ∠10

10. ∠9 and ∠11

11. ∠8 and ∠9

12. ∠10 and ∠12

Refer to the figure at the right to determine the measure of each given angle.



13. ∠*SYX*

14. ∠*XYW*

15. ∠*WYV*

16. ∠*SYW*

17. ∠*TYX*

18. ∠*VYX*

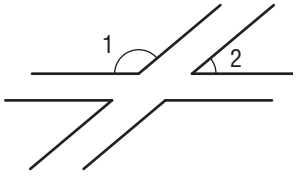
NAME _____ DATE _____ PERIOD _____

Lesson 1 Problem-Solving Practice

Classify Angles

1. CLOCKS The time shown on the clock is 11:05. Starting at this time, approximately what time will it be when the hands form an obtuse angle?

2. AIRPORT The runways at a local airport are sketched in the figure. Classify $\angle 1$ and $\angle 2$ as *acute*, *obtuse*, *right*, or *straight*.

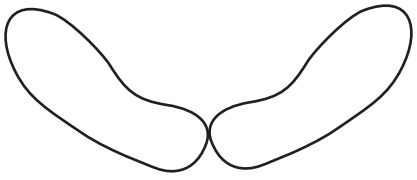


3. ALPHABET Which of the following letters contain at least one acute angle? Which contain vertical angles? Which contain adjacent angles?

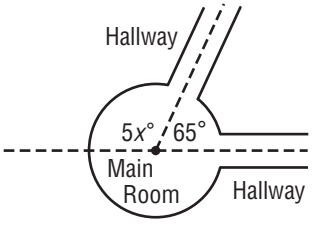
A E L X

4. CLOCKS The time shown on the clock is 12:07. After 20 minutes have passed, will the angle formed by the hour and minute hands be *acute*, *obtuse*, *right*, or *straight*?

5. BALLET When a ballet dancer's feet are in first position, the heels are touching, and the feet are turned out. A dancer with excellent technique can position his or her feet so that they are nearly in a straight line. Isabella is practicing her technique. Classify the angle her feet form as *acute*, *obtuse*, or *right*.



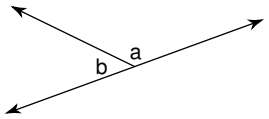
6. ARCHITECTURE The plans for a new aquarium call for 2 hallways of exhibits leading out of a circular main room as shown. What is the value of x?

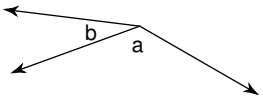


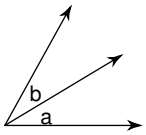
Angle Pair Relationships

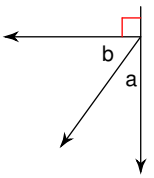
Date_____ Period____

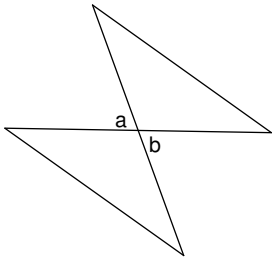
Name the relationship: complementary, linear pair, vertical, or adjacent.

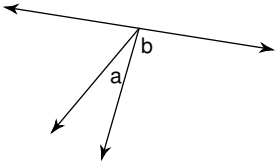
1) 

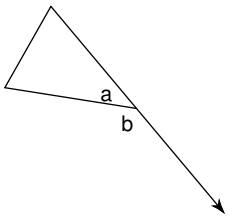
2) 

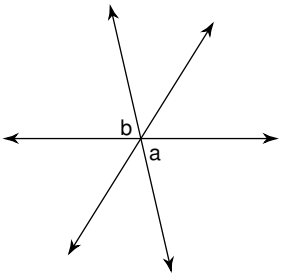
3) 

4) 

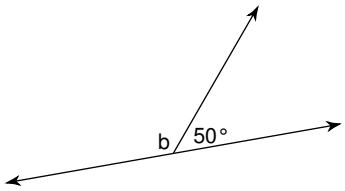
5) 

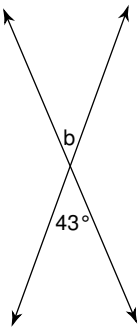
6) 

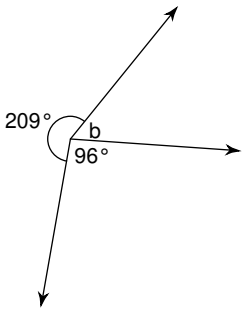
7) 

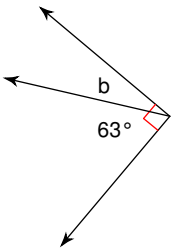
8) 

Find the measure of angle b.

9) 

10) 

11) 

12) 

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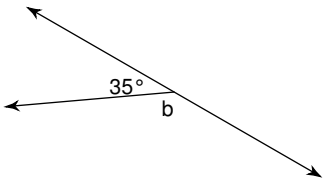

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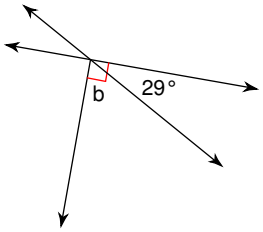

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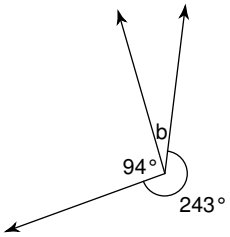

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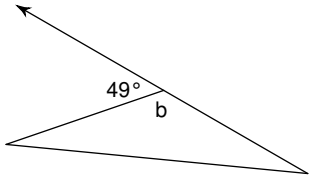

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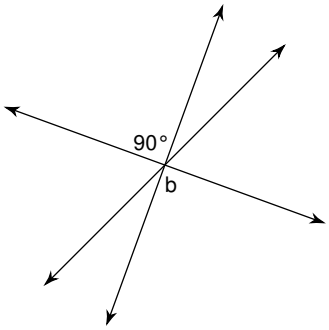

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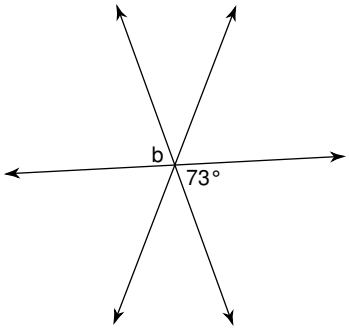
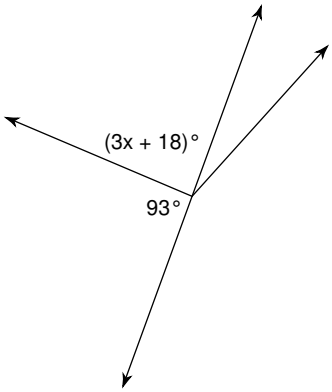


Find the value of x.

19)



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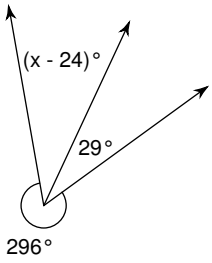

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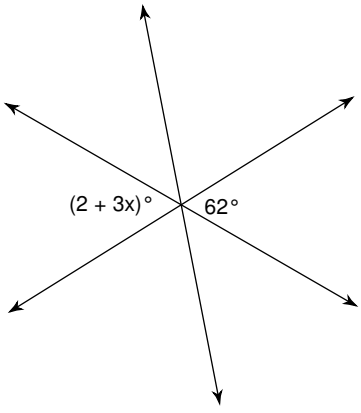

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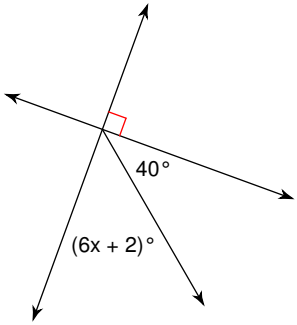
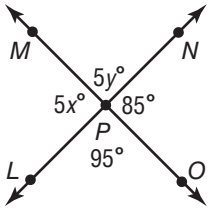


NAME _____ DATE _____ PERIOD _____

Lesson 1 Homework Practice

Classify Angles

Use the figure at the right to answer Exercises 1–4.



1. Name two angles that are vertical.

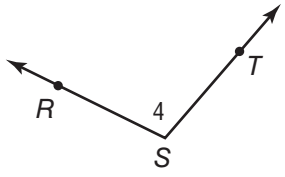
2. Name two angles that are adjacent.

3. Find the value of x.

4. Find the value of y.

Name each angle in four ways. Then classify the angle as *acute*, *right*, *obtuse*, or *straight*.

5.



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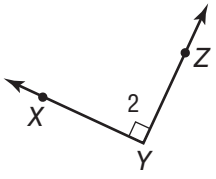

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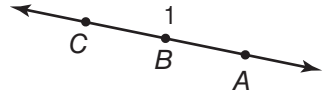

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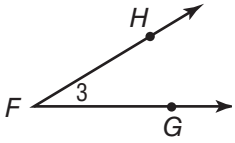

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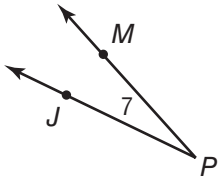

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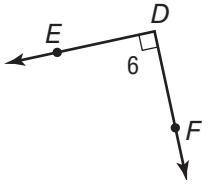
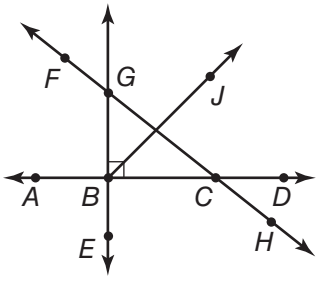


Use the figure at the right to name the following.



11. two acute angles

12. two straight angles

13. two right angles

14. two obtuse angles

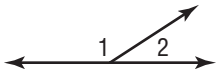
NAME _____ DATE _____ PERIOD _____

Lesson 2 Skills Practice

Complementary and Supplementary Angles

Identify each pair of angles as *complementary*, *supplementary*, or *neither*.

1.



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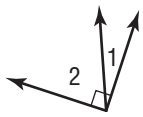

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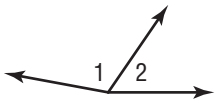

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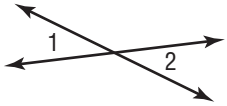

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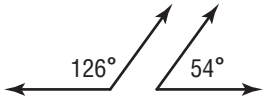

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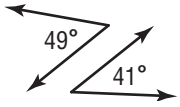
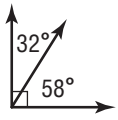


7.

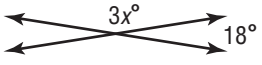
8.

9.



ALGEBRA Find the value of x in each figure.

10.



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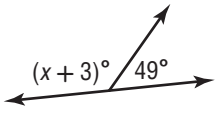

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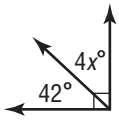

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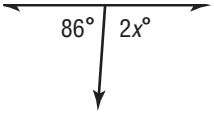

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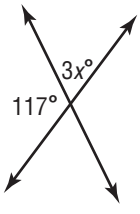

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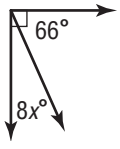

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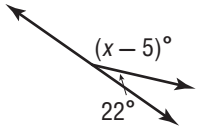
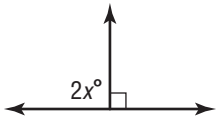
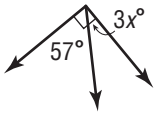


17.



18.

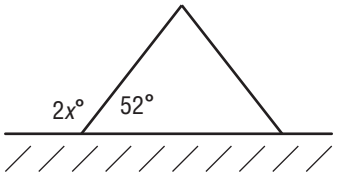


NAME _____ DATE _____ PERIOD _____

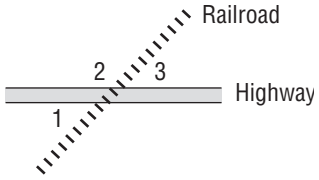
Lesson 2 Problem-Solving Practice

Complementary and Supplementary Angles

1. PYRAMIDS A side view of the Great Pyramid at Giza is shown below. The sides of the pyramid make an angle of 52° with respect to the ground. What is the value of x?

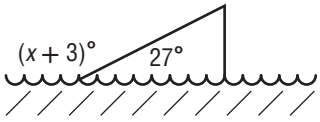


2. RAILROAD A map shows a railroad crossing a highway, as shown below. Which of the numbered angles are supplementary angles?

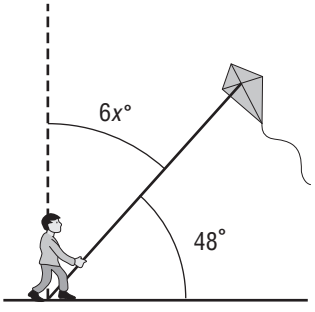


3. RAILROAD Refer to the map shown in Exercise 2. If $m\angle 1$ is 64°, what is the measure of $\angle 2$?

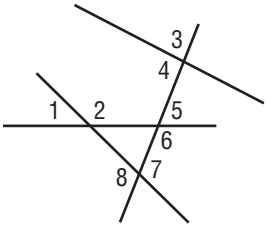
4. SKIING A ski jump makes an angle of 27° with respect to the water as shown below. How are the 27° angle and the unknown angle related? What is the value of x?



5. KITES A kite string makes an angle of 48° with respect to the ground as shown below. The dashed line is vertical and the ground is horizontal. How are the 48° angle and the unknown angle related? What is the value of x?



6. GAMES In a game of pick-up-sticks, the last 4 sticks are shown below. Which of the numbered angles are supplementary angles?



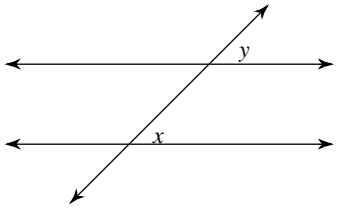
 Name_____

Parallel Lines and Transversals

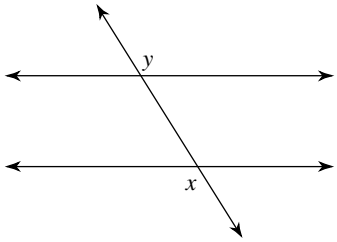
Date_____ Period____

Identify each pair of angles as corresponding, alternate interior, alternate exterior, or consecutive interior.

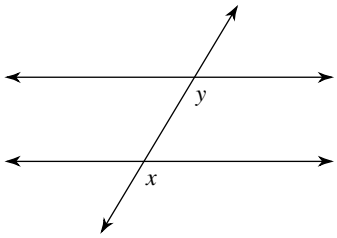
1)



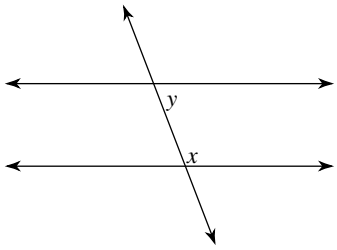
2)



3)



4)



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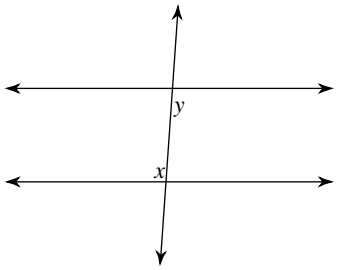
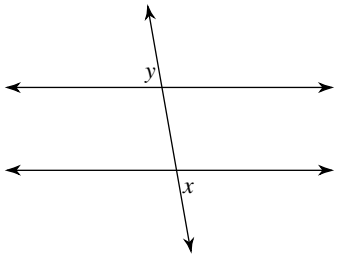


6)



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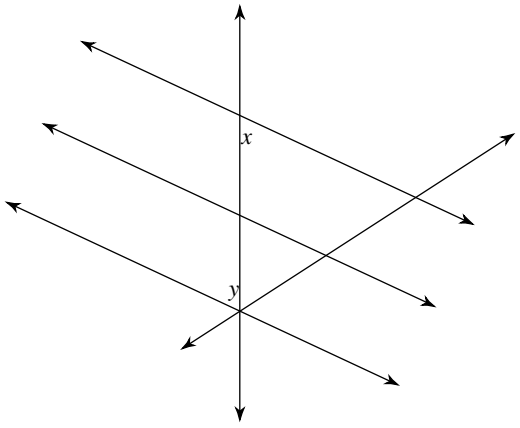
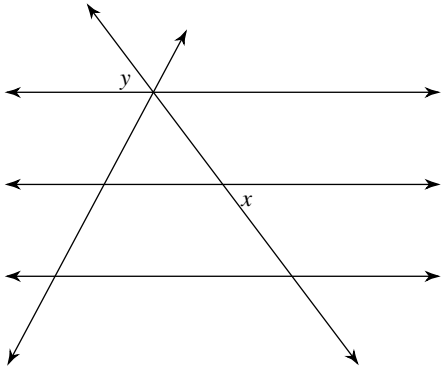


8)



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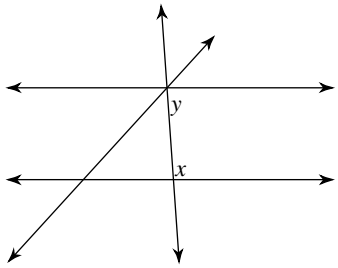
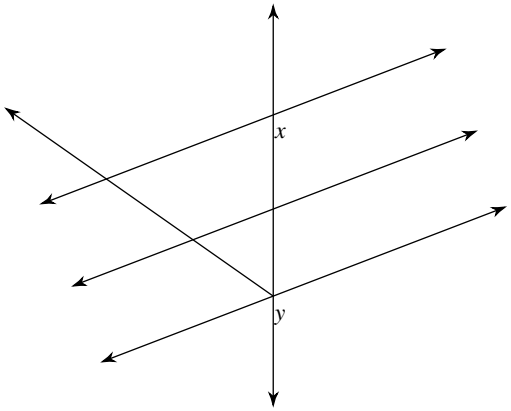
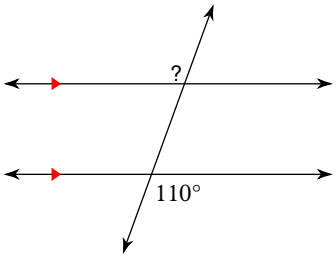


10)

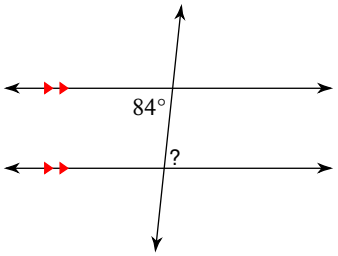


Find the measure of each angle indicated.

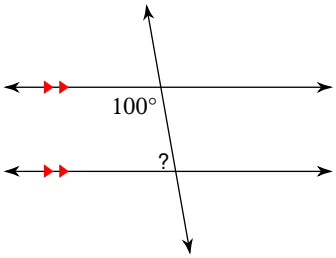
11)



12)



13)



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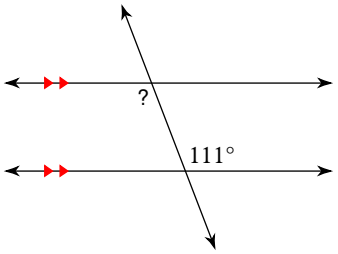

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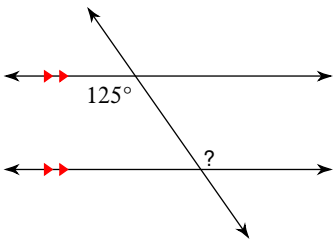
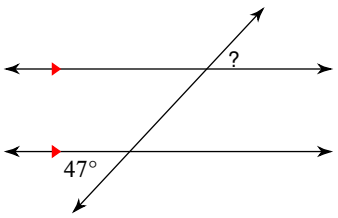
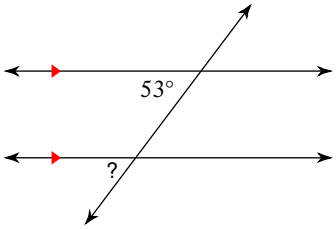


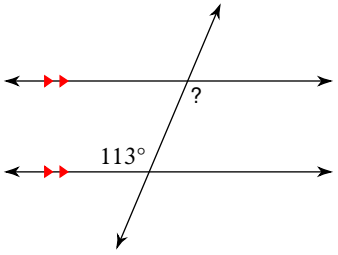
16)



17)

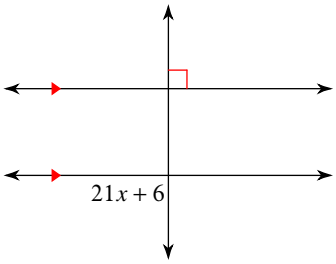


18)



Solve for x.

19)



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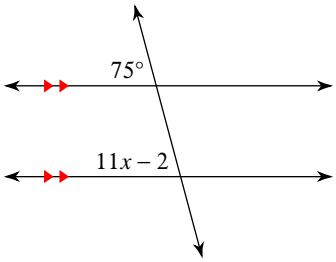
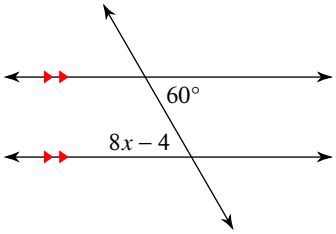
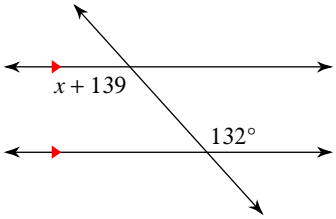


21)



22)



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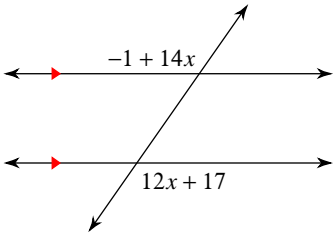
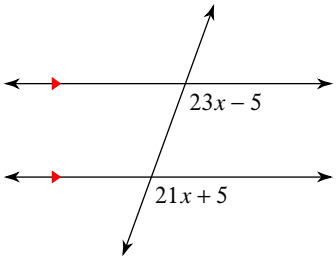
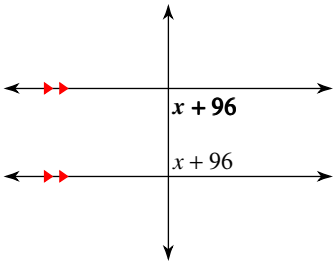


24)

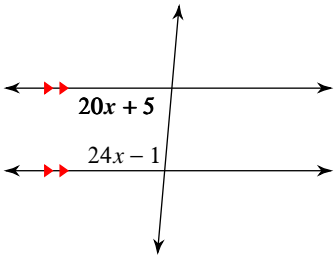


Find the measure of the angle indicated in bold.

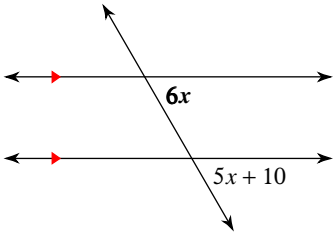
25)



26)



27)



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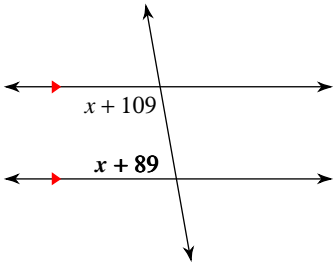
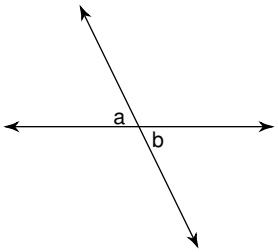


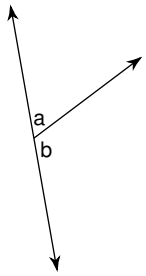
 Name_____

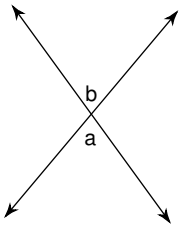
Angle Relationships

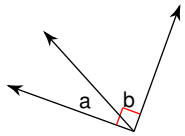
Date_____ Period____

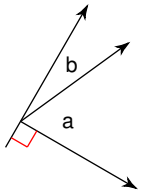
Name the relationship: complementary, supplementary, vertical, or adjacent.

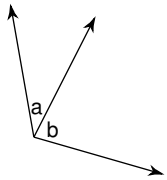
1) 

2) 

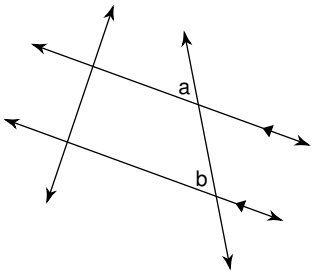
3) 

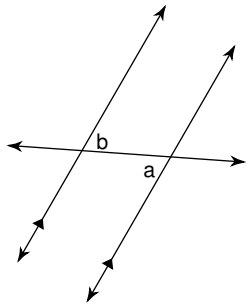
4) 

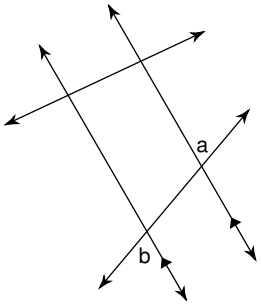
5) 

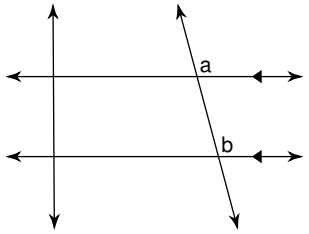
6) 

Name the relationship: alternate interior, corresponding, or alternate exterior.

7) 

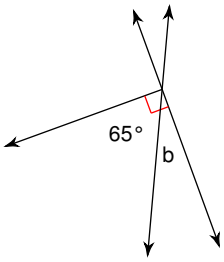
8) 

9) 

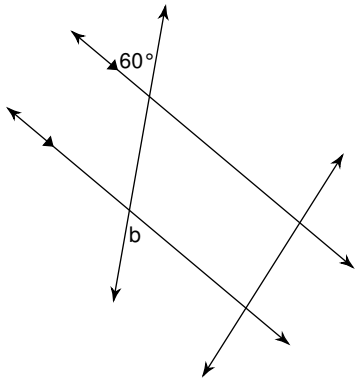
10) 

Find the measure of angle b.

11)



12)



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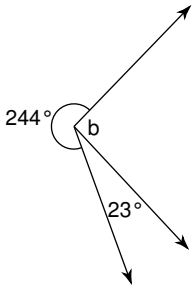

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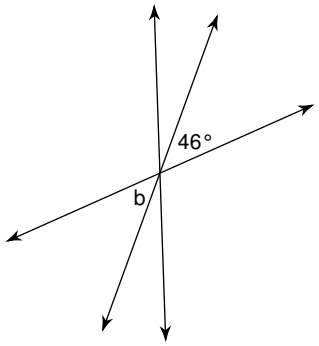
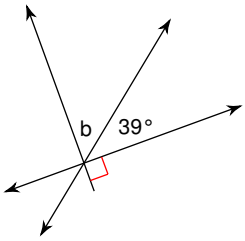
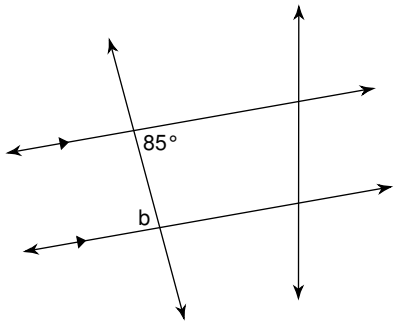


15)

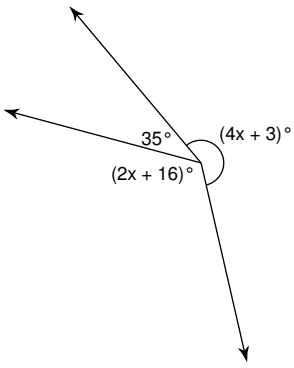


16)

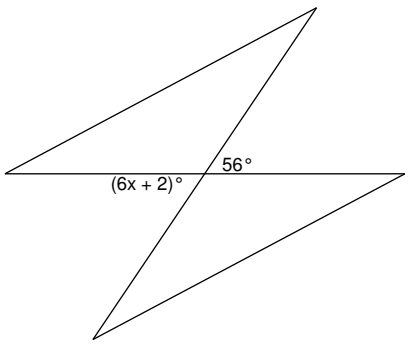


Find the value of x.

17)



18)



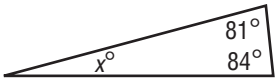
NAME _____ DATE _____ PERIOD _____

Lesson 3 Skills Practice

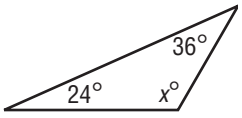
Triangles

Find the value of x. Then classify the triangle by its angles.

1.



2.



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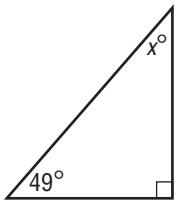
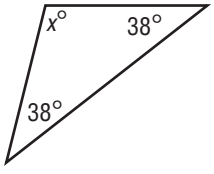
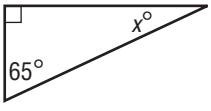


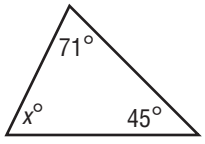
4.



5.



6.



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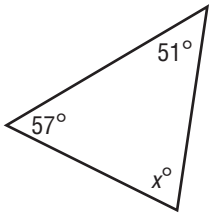

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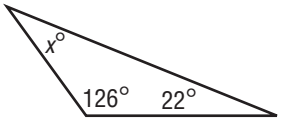

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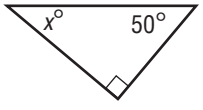


Draw a triangle that satisfies each set of conditions. Then classify each triangle.

10. a triangle with one obtuse angle and no congruent sides

11. a triangle with three acute angles and three congruent sides

12. a triangle with one right angle and two congruent sides

NAME _____ DATE _____ PERIOD _____

Lesson 3 Problem-Solving Practice

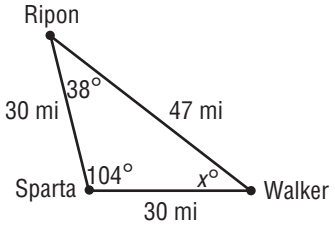
Triangles

1. TAILORING Each lapel on a suit jacket is in the shape of a triangle. The three angles of each triangle measure 47°, 68°, and 65°. Classify the triangle by its angles.

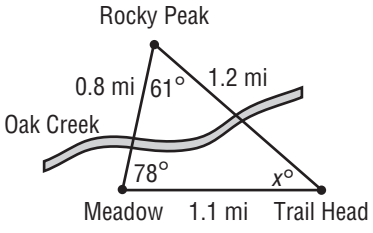
2. FLAGS A naval distress signal flag is in the shape of a triangle. The three sides of the triangle measure 5 feet, 9 feet, and 9 feet. Classify the triangle by its sides.

3. CARPENTRY The supports of a wood table are in the shape of a right triangle. Find the third angle of the triangle if the measure of one of the angles is 23°.

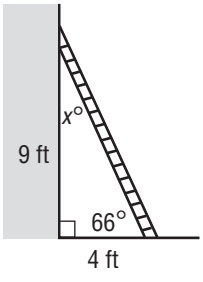
4. MAPS The three towns of Ripon, Sparta, and Walker form a triangle as shown below. Classify the triangle by its angles and by its sides. What is the value of x in the triangle?



5. HIKING The figure shows the Oak Creek trail, which is shaped like a triangle. Classify the triangle by its angles and by its sides. What is the value of x in the figure?



6. LADDER The figure shows a ladder leaning against a wall, forming a triangle. Classify the triangle by its angles and by its sides. What is the value of x in the figure?



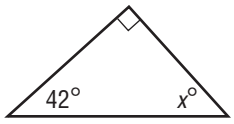
NAME _____ DATE _____ PERIOD _____

Lesson 3 Homework Practice

Triangles

Find the value of x.

1.



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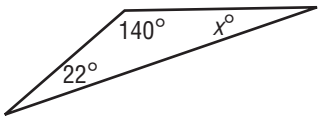

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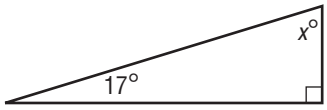


Find the missing measure in each triangle with the given angle measures.

4. 45°, 35.8°, x°

5. 100°, x°, 40.7°

6. x°, 90°, 16.5°

7. Find the third angle of a right triangle if one of the angles measures 24°.

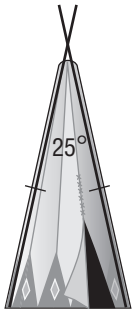
8. What is the third angle of a right triangle if one of the angles measures 51.1°?

9. ALGEBRA Find $m\angle A$ in $\triangle ABC$ if $m\angle B = 38°$ and $m\angle C = 38°$.

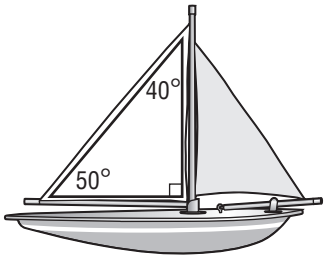
10. ALGEBRA In $\triangle XYZ$, $m\angle Z = 113°$ and $m\angle X = 28°$. What is $m\angle Y$?

Classify the marked triangle in each object by its angles and by its sides.

11.



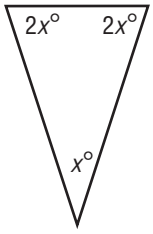
12.



13.

ALGEBRA Find the value of x in each triangle.

14.



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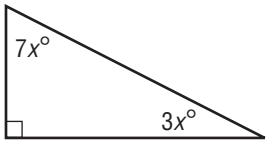

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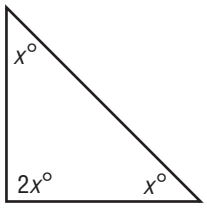


NAME _____ DATE _____ PERIOD _____

Lesson 4 Skills Practice

Scale Drawings

ARCHITECTURE The scale on a set of architectural drawings for a house is $\frac{1}{2}$ inch $= 1\frac{1}{2}$ feet. Find the length of each part of the house.

	Room	Drawing Length	Actual Length
1.	Living Room	5 inches	
2.	Dining Room	4 inches	
3.	Kitchen	$5\frac{1}{2}$ inches	
4.	Laundry Room	$3\frac{1}{4}$ inches	
5.	Basement	10 inches	
6.	Garage	$8\frac{1}{3}$ inches	

ARCHITECTURE As part of a city building refurbishment project, architects have constructed a scale model of several city buildings to present to the city commission for approval. The scale of the model is 1 inch = 9 feet.

7. The courthouse is the tallest building in the city. If it is $7\frac{1}{2}$ inches tall in the model, how tall is the actual building?

8. The city commission would like to install new flagpoles that are each 45 feet tall. How tall are the flagpoles in the model?

9. In the model, two of the flagpoles are 4 inches apart. How far apart will they be when they are installed?

10. The model includes a new park in the center of the city. If the dimensions of the park in the model are 9 inches by 17 inches, what are the actual dimensions of the park?

11. Find the scale factor.

NAME _____ DATE _____ PERIOD _____

Lesson 4 Problem-Solving Practice

Scale Drawings

1. CARS A scale drawing of an automobile has a scale of 1 inch $= \frac{1}{2}$ foot. The actual width of the car is 8 feet. What is the width on the scale drawing?	**2. MODELS** A model ship is built to a scale of 1 centimeter : 5 meters. The length of the model is 30 centimeters. What is the actual length of the ship?
3. BUILDING Curtis wants to build a model of a 180-meter tall building. He will be using a scale of 1.5 centimeters = 3.5 meters. How tall will the model be? Round your answer to the nearest tenth.	**4. TRAVEL** Merritt is driving to Mount Shasta. On her map, she is a distance of $7\frac{3}{4}$ inches away. The scale of the map is $\frac{1}{2}$ inch = 50 miles. How far must Merritt travel to reach her destination?
5. MAPS A map of Levi's property is being made with a scale of 2 centimeters: 3 meters. What is the scale factor?	**6. LANDSCAPING** A pond is being dug according to plans that have a scale of 1 inch = 6.5 feet. The maximum distance across the pond is 9.75 inches on the plans. What will be the actual maximum distance across the pond?

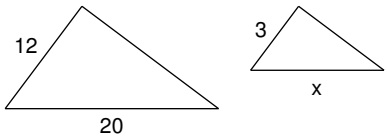
 Name_____

Similar Figures

Date_____ Period____

Each pair of figures is similar. Find the missing side.

1)



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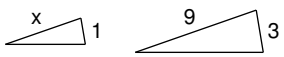

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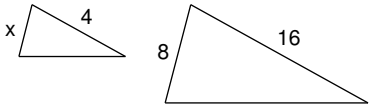

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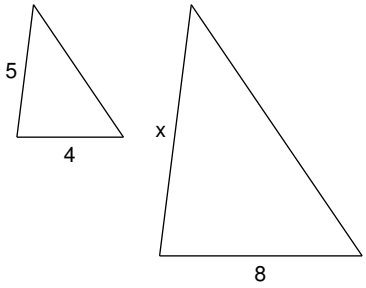

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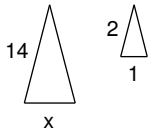

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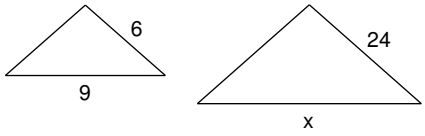

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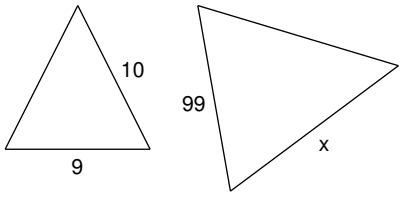

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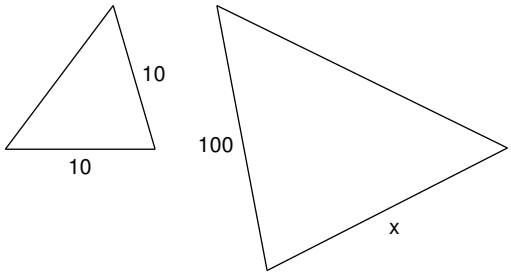

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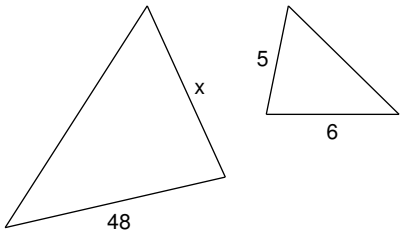

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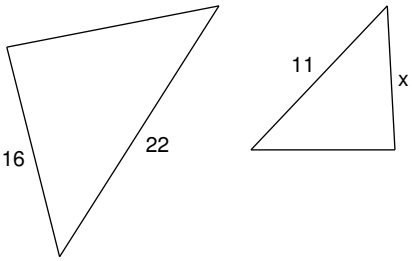

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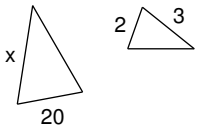

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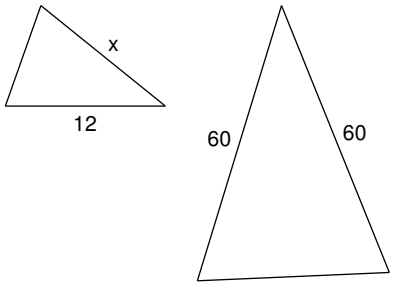

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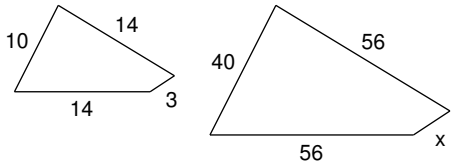

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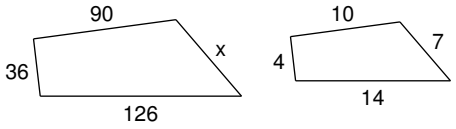

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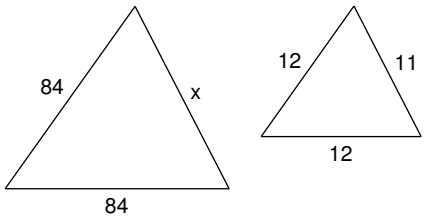

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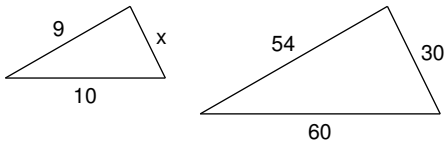
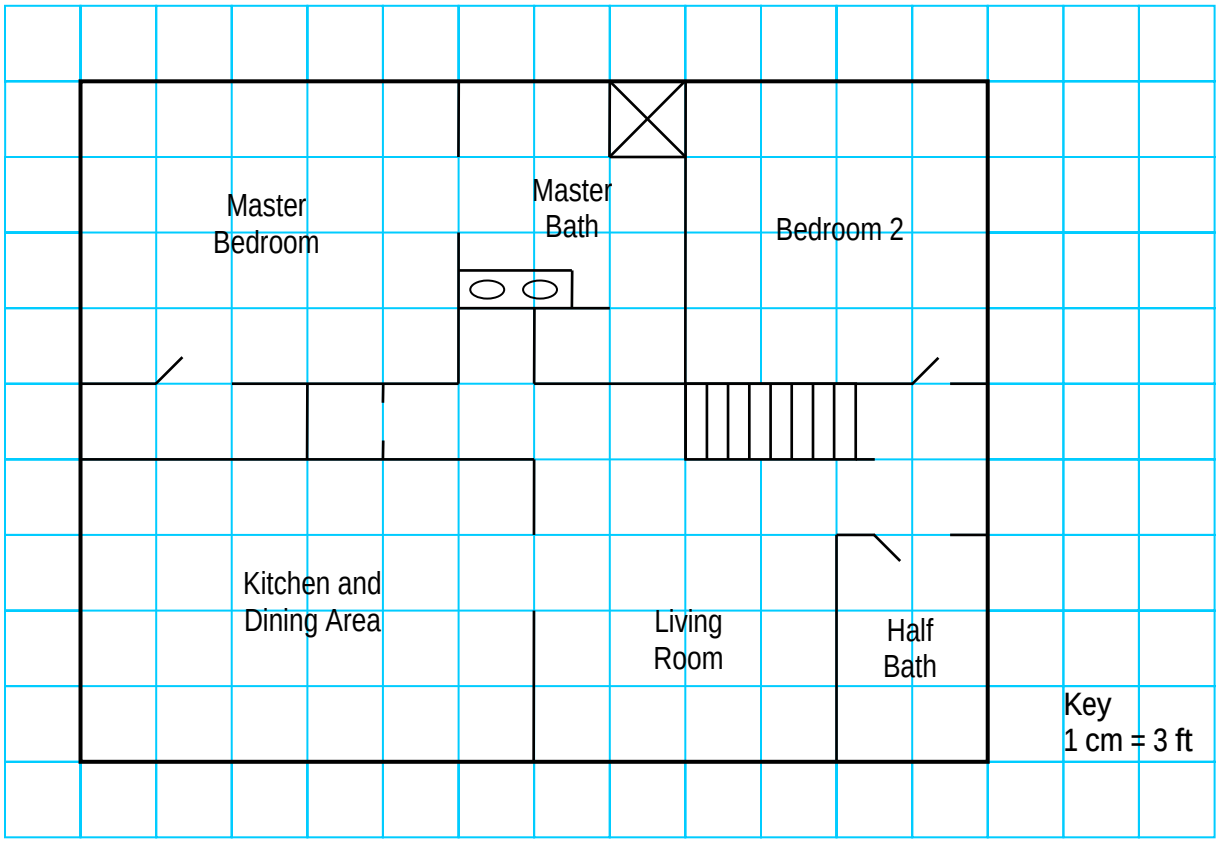


NAME _____ DATE _____ PERIOD _____

Lesson 4 Extra Practice

Scale Drawings

Use the scale drawing to find the actual length and width of each room. Then find the actual area of each room.



1. master bedroom

2. bedroom 2

3. kitchen and dining area

4. half bath

On a map, the scale is 1 inches = 50 miles. For each map distance, find the actual distance.

5. 5 inches

6. 12 inches

7. $2\frac{3}{8}$ inches

8. $\frac{4}{5}$ inch

9. $2\frac{5}{6}$ inches

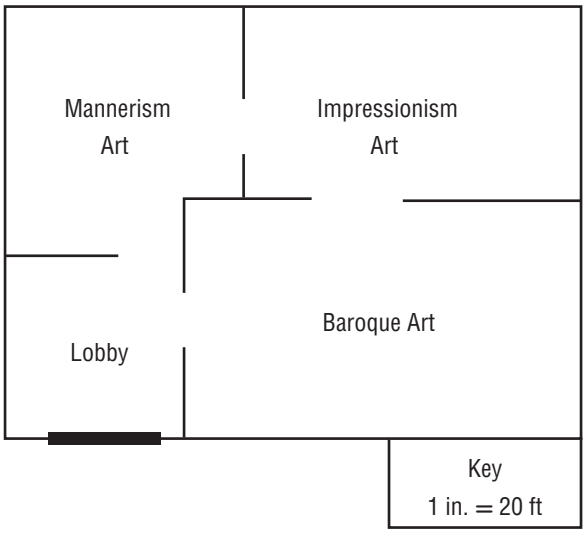
10. 3.25 inches

NAME _____ DATE _____ PERIOD _____

Lesson 4 Homework Practice

Scale Drawings

Use the diagram of a section of the art museum shown. Use a ruler to measure.



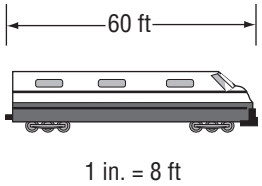
1. What is the actual length of the *Impressionism Art* room?

2. Find the actual dimensions of the *Baroque Art* room.

3. Find the scale factor for this blueprint.

Find the length of each model. Then find the scale factor.

4.



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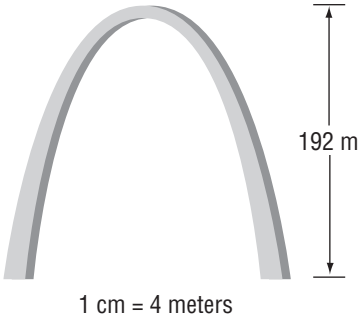

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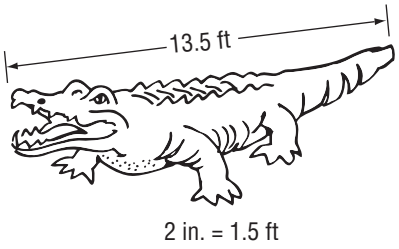


7. **SKYSCRAPER** A model of a skyscraper is made using a scale of 1 inch:75 feet. What is the height of the actual building if the height of the model is $19\frac{2}{5}$ inches?

8. **GEOGRAPHY** Salem and Eugene, Oregon, are 64 miles apart. If the distance on the map is $3\frac{1}{4}$ inches, find the scale of the map.

9. **PYRAMIDS** The length of a side of the Great Pyramid of Khufu at Giza, Egypt, is 751 feet. If you were to make a model of the pyramid to display on your desk, which would be an appropriate scale: 1 in. = 10 ft or 1 ft = 500 ft? Explain your reasoning.

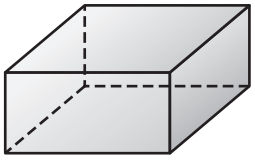
NAME _____ DATE _____ PERIOD _____

Lesson 5 Skills Practice

Draw Three-Dimensional Figures

Draw a top, a side, and a front view of each solid.

1.



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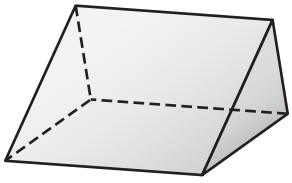

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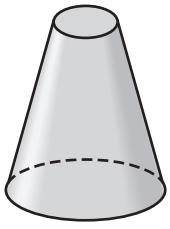
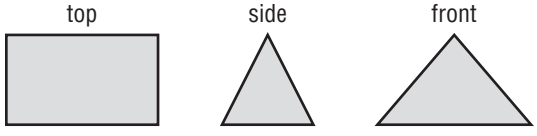


Draw a corner view of each three-dimensional figure whose top, side, and front views are shown. Use isometric dot paper.

4.



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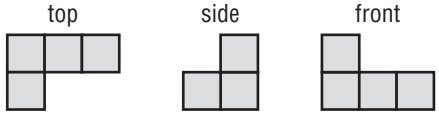
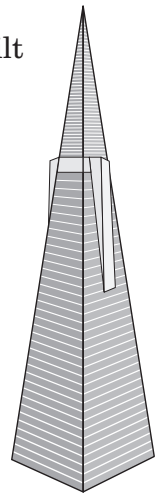


NAME _____ DATE _____ PERIOD _____

Lesson 5 Problem-Solving Practice

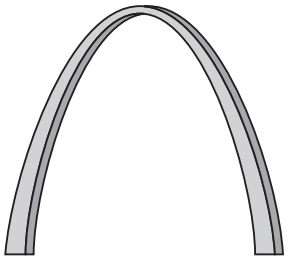
Draw Three-Dimensional Figures

1. ARCHITECTURE The Transamerica Pyramid, built from 1969 to 1972, towers above the San Francisco skyline.



Draw the top, side, and front views of the Transamerica building.

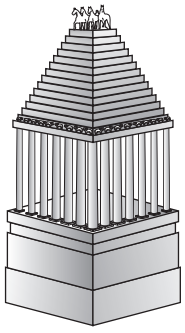
2. MONUMENTS Since its completion in 1965, Eero Saarinen's 630-foot Gateway Arch has stood above St. Louis.



Draw the top, side, and front views of the Gateway Arch.

3. GRAPHICS Dan is creating a computer-generated image of a coffee cup. To do this, he needs to enter the top, side, and front views of the cup. Draw the views that Dan should enter.

4. HISTORY The Mausoleum at Halicarnassus is one of the Seven Wonders of the Ancient World. Draw a top view, a side view, and a front view of the mausoleum without the chariot statue at the top.

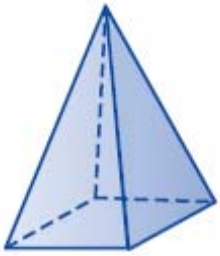


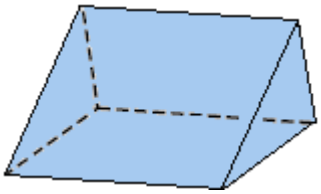
NAME _____ DATE _____ PERIOD _____

Lesson 5 Extra Practice

Draw Three-Dimensional Figures

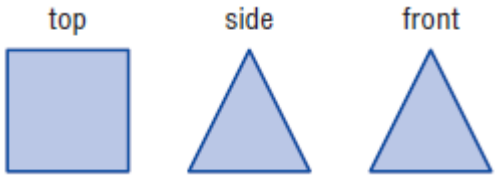
Draw a top, a side, and a front view of each figure.

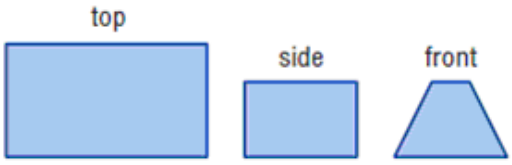
1. 

2. 

3. 

Draw a corner view of each three-dimensional figure whose top view, side view, and front view are shown.

4. 

5. 

NAME _____ DATE _____ PERIOD _____

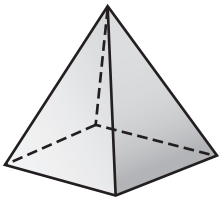
Lesson 5 Homework Practice

Draw Three-Dimensional Figures

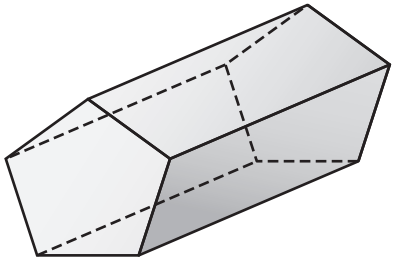
Draw a top, a side, and a front view of each solid.

1.

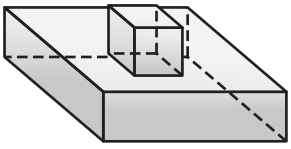
2.



3.

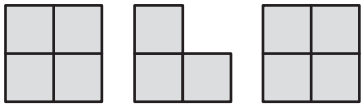


4.

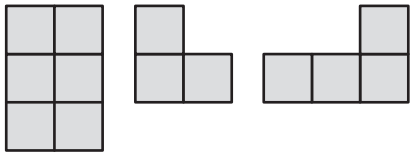


Draw a corner view of each three-dimensional figure whose top, side, and front views are shown. Use isometric dot paper.

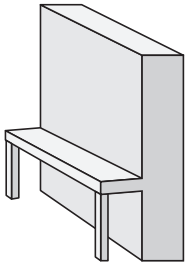
5.



6.



7. Sketch views of the top, side, and front of the piano shown.



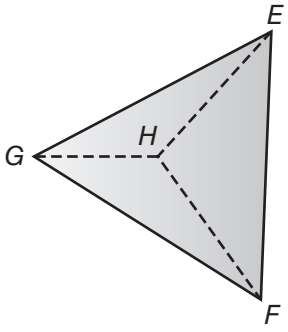
NAME _____ DATE _____ PERIOD _____

Lesson 6 Skills Practice

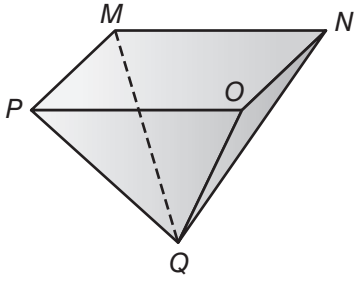
Cross Sections

Identify each figure. Then name the bases, faces, edges, and vertices.

1.

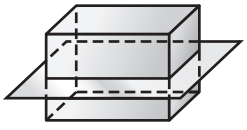


2.



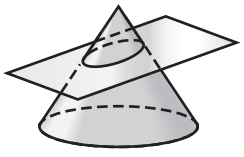
Describe the shape resulting from each cross section.

3.

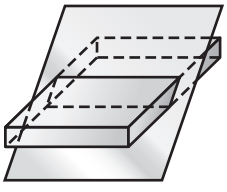


4.

5.



6.

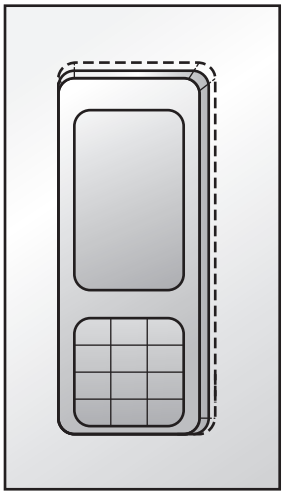


NAME _____ DATE _____ PERIOD _____

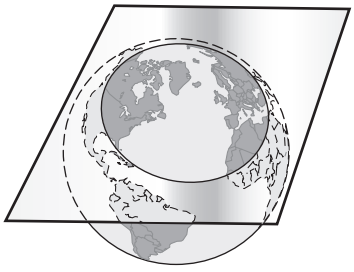
Lesson 6 Problem-Solving Practice

Cross Sections

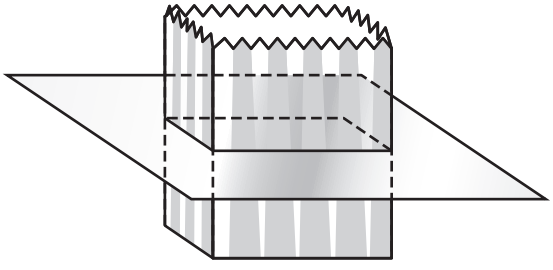
1. Describe the shape resulting from the cross section of the cell phone.



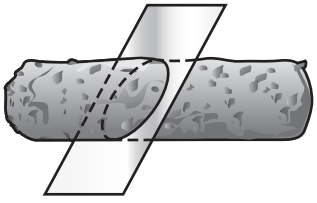
2. Describe the shape resulting from the cross section of Earth.



3. Describe the shape resulting from the cross section of a container of popcorn.



4. Describe the shape resulting from the cross section of the roll of cookie dough.



NAME _____ DATE _____ PERIOD _____

Lesson 6 Extra Practice

Cross Sections

Identify each figure. Then name the bases, faces, edges, and vertices.

1.

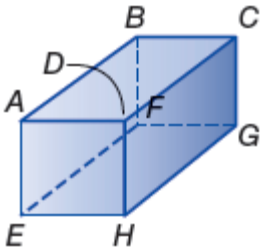


figure name:
bases:

faces:

edges:

vertices:

2.

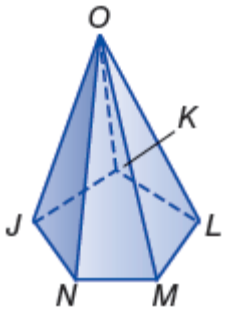


figure name:
bases:
faces:
edges:

vertices:

3.

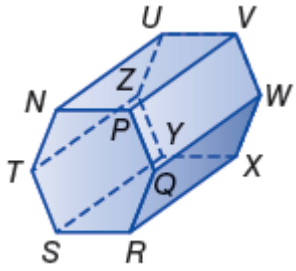


figure name:
bases:
faces:

edges:

vertices:

4.

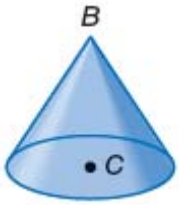
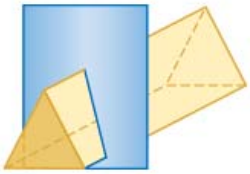


figure name:
bases:
faces:
edges:
vertices:

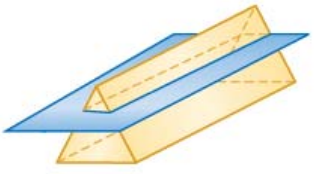
Describe the shape resulting from each cross section.

5.



6.

7.



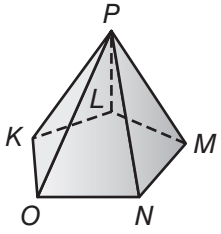
NAME _____ DATE _____ PERIOD _____

Lesson 6 Homework Practice

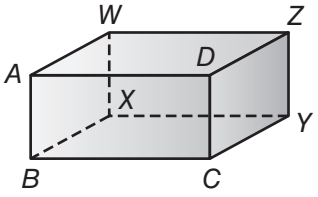
Cross Sections

Identify each figure. Then name the bases, faces, edges, and vertices.

1.

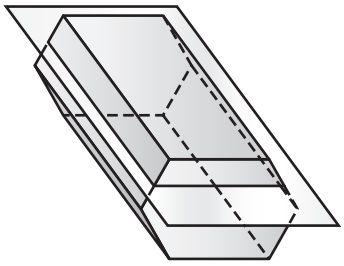


2.

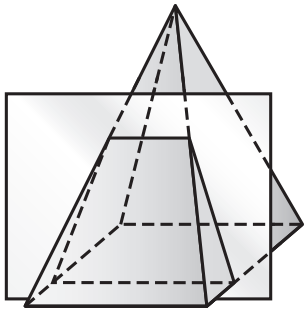


Describe the shape resulting from each cross section.

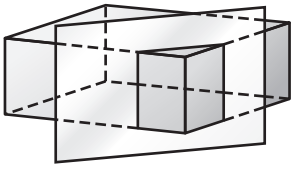
5.



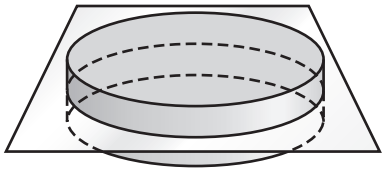
6.



7.



8.



NAME _____ DATE _____ PERIOD _____

Lesson 1 Skills Practice

Circumference

Find the radius or diameter of each circle with the given dimensions.

1. $r = 13$ cm

2. $d = 4$ ft

3. $r = 10$ mm

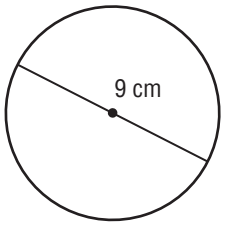
4. $d = 16$ in.

5. $r = 7$ mi

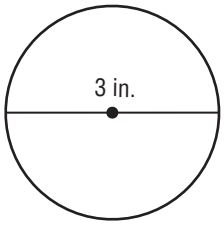
6. $d = 22$ yd

Find the circumference of each circle. Use 3.14 or $\frac{22}{7}$ for π. Round to the nearest tenth if necessary.

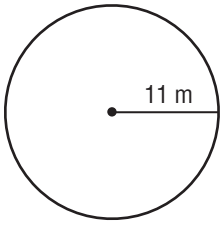
7.



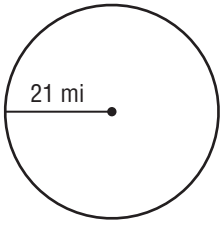
8.



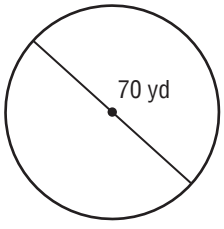
9.



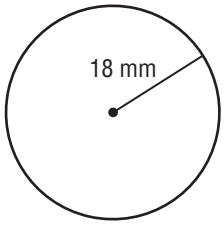
10.



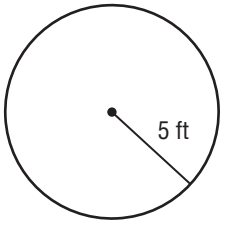
11.



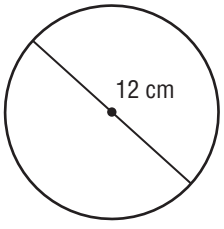
12.



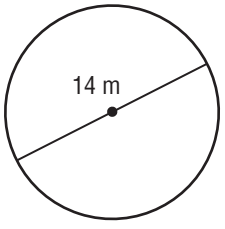
13.



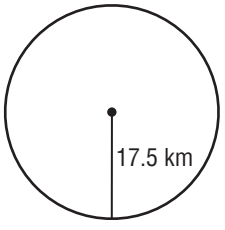
14.



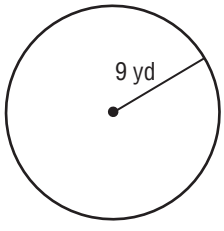
15.



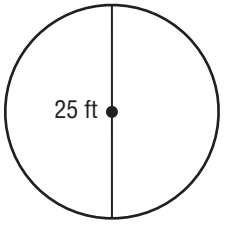
16.



17.



18.



NAME _____ DATE _____ PERIOD _____

Lesson 1 Problem-Solving Practice

Circumference

AUDIO MEDIA For Exercises 1–3, use the table that shows the sizes of three main audio media: vinyl, CD, and mini-disc.

Diameters of Audio Media	
Medium	**Diameter (inches)**
Vinyl Disc	12
Compact Disc (CD)	5
Mini Compact Disc (Mini-Disc)	2.5

1. Find the circumference of a CD. Use 3.14 for π.

2. When a record player needle is placed on the outside edge of a vinyl disc, find how far the needle travels in one rotation. Use 3.14 for π. Round to the nearest tenth.

3. What is the difference between the circumference of a vinyl disc and a mini-disc? Use 3.14 for π. Round to the nearest tenth.

4. CROP CIRCLES On June 8, 1992, a crop circle with an 18-meter radius was found in a wheat field near Szekesfehervar, 43 miles southwest of Budapest. Find its circumference. Use 3.14 for π.

5. SEQUOIAS The largest tree in the world is the General Sherman sequoia in Sequoia National Park, California. It is 275 feet high, has a diameter of 36.5 feet, and has an estimated weight of 2,150 tons. Find the sequoia's circumference to the nearest tenth of a foot. Use 3.14 for π.

6. SEQUOIAS The diameter of the sequoia in Exercise 5, measured 180 feet above the ground, is 14 feet. Find the circumference of the tree at this height. Use $\frac{22}{7}$ for π.

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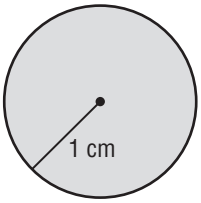
Lesson 2 Skills Practice

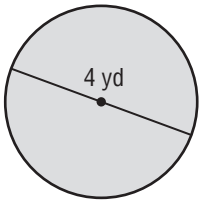
Area of Circles

Find the area of each circle. Round to the nearest tenth.
Use 3.14 or $\frac{22}{7}$ for π.

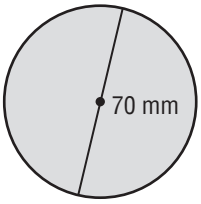
1.



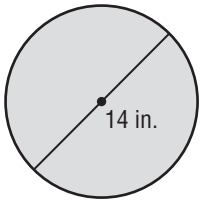
2.



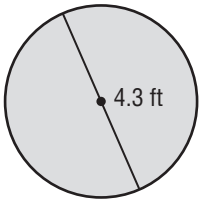
3.



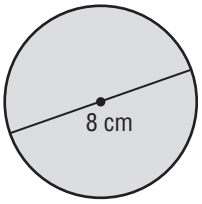
4.



5.



6.



7. radius = 5.7 mm

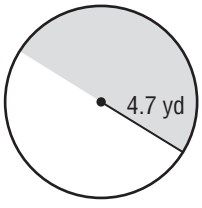
8. radius = 8.2 ft

9. diameter = 3 in.

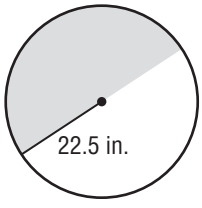
10. diameter = 15.6 cm

Find the area of each semicircle. Round to the nearest tenth.
Use 3.14 for π.

11.



12.



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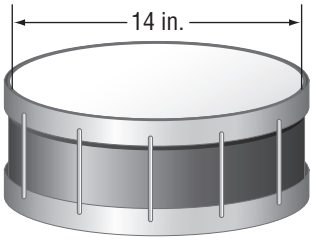
Lesson 2 Problem-Solving Practice

Area of Circles

1. POOLS Susan designed a circular pool with a diameter of 25 meters. What is the area of the bottom of the pool? Round to the nearest tenth.

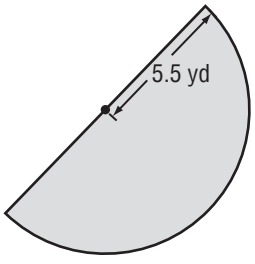
2. MONEY Find the area of the coin to the nearest tenth.

3. DRUMS What is the area of the drumhead on the drum shown below? Round to the nearest tenth.



4. PIZZA Estimate the area of the top of a round pizza that has a diameter of 16 inches. Round to the nearest tenth.

5. GARDENING Vidur needs to buy mulch for the garden with the dimensions shown in the figure. For how much area does Vidur need to buy mulch? Round to the nearest tenth.



6. UTILITIES What is the area of the top surface of a circular manhole cover that has a radius of 30 centimeters? Use 3.14 for π.

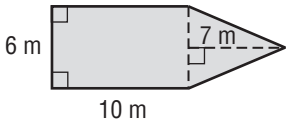
NAME _____ DATE _____ PERIOD _____

Lesson 3 Skills Practice

Area of Composite Figures

Find the area of each figure. Round to the nearest tenth if necessary.

1.



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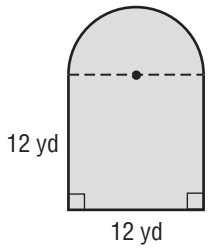

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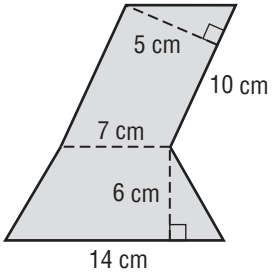

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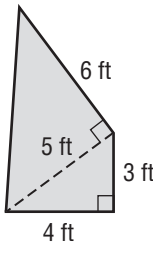

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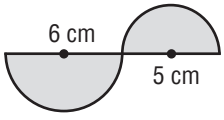

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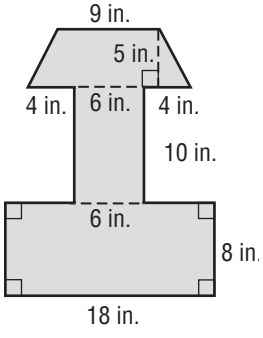

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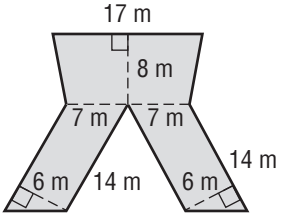

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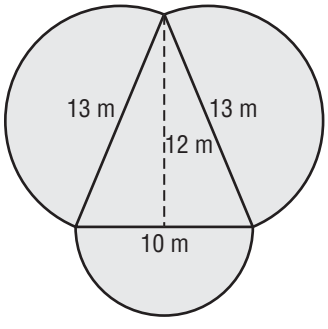

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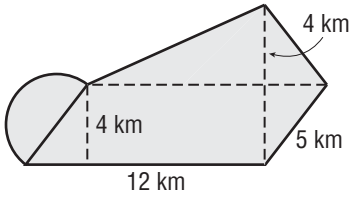
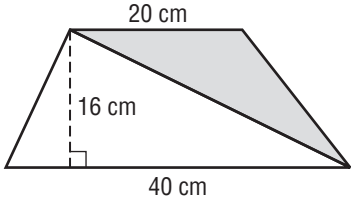


Find the area of the shaded region.

10.



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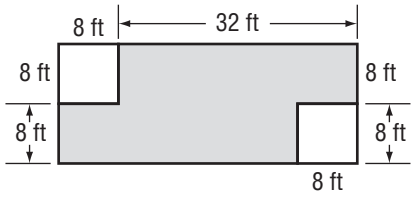


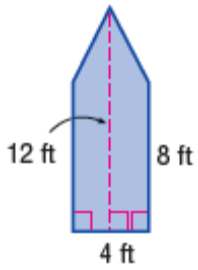
NAME _____ DATE _____ PERIOD _____

Lesson 3 Extra Practice

Area of Composite Figures

Find the area of each figure. Round to the nearest tenth if necessary. Use 3.14 for π.

1.



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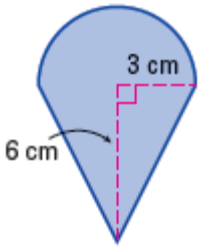

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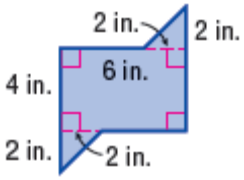

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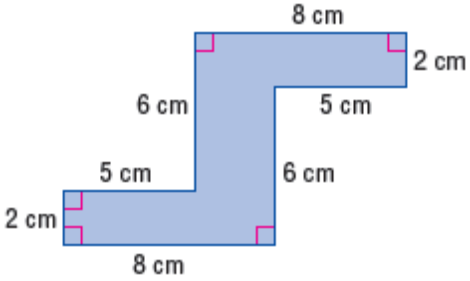

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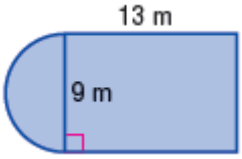

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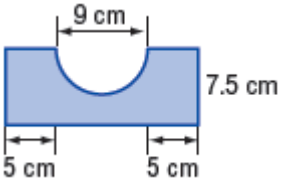
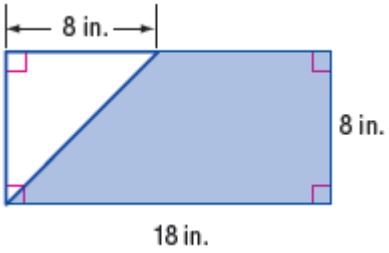


Find the area of the shaded region. Round to the nearest tenth if necessary.

7.



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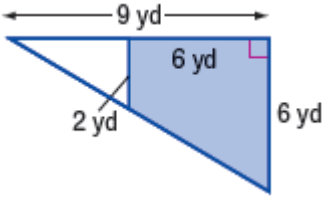
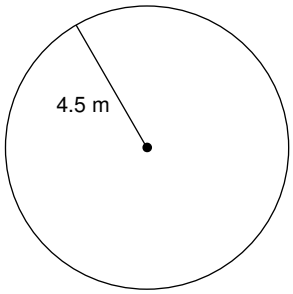


Circles

Date_____ Period____

Find the circumference of each circle. Round to the nearest tenth.

1)



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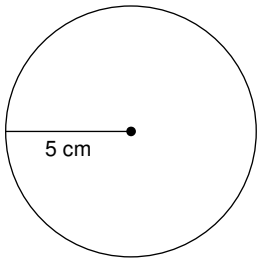

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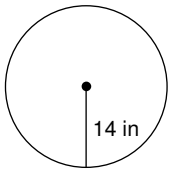

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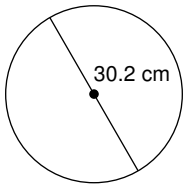

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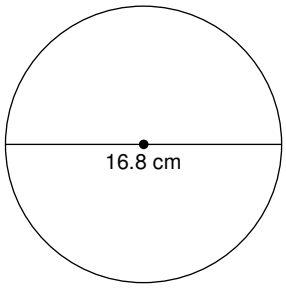

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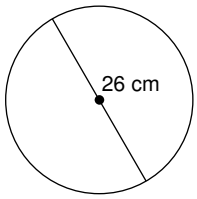
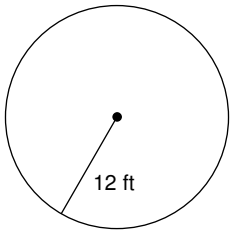


7) radius = 12 yd

8) radius = 5.5 mi

Find the area of each. Round to the nearest tenth.

9)



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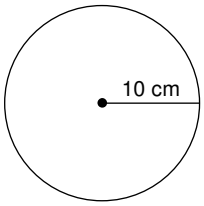

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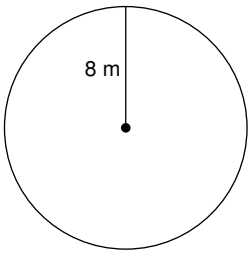

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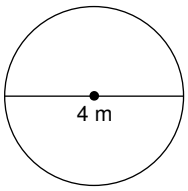

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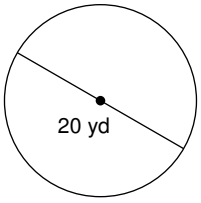

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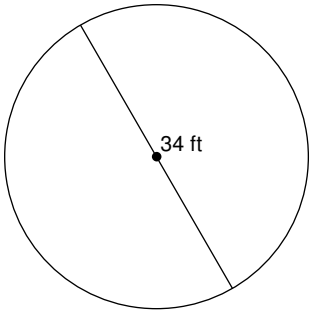


15) radius = 8 ft

16) radius = 5 cm

Find the diameter of each circle.

17) area = 4π in^2

18) area = 49π yd^2

19) circumference = 162π yd

20) circumference = 30π yd

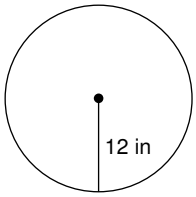
 Name_____

Circumference and Area of Circles

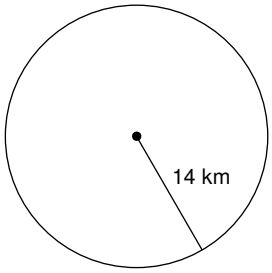
Date_____ Period____

Find the area of each. Use your calculator's value of π. Round your answer to the nearest tenth.

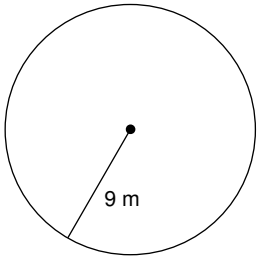
1)



2)



3)



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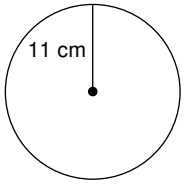


5) radius = 2.6 in

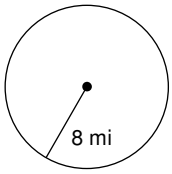
6) radius = 34.1 in

7) radius = 13.2 km

8) radius = 29.9 km

Find the circumference of each circle. Use your calculator's value of π. Round your answer to the nearest tenth.

9)



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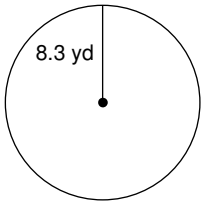

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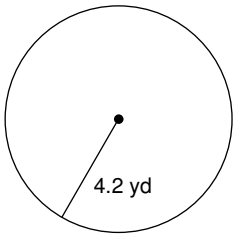
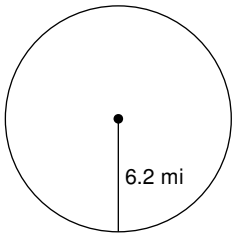


12)



13) radius = 5.2 ft

14) radius = 11.1 ft

15) radius = 9.5 in

16) radius = 9.3 in

Find the radius of each circle. Use your calculator's value of π. Round your answer to the nearest tenth.

17) circumference = 62.8 mi

18) circumference = 69.1 yd

19) circumference = 12.6 yd

20) circumference = 25.1 ft

Find the diameter of each circle. Use your calculator's value of π. Round your answer to the nearest tenth.

21) area = 201.1 in²

22) area = 78.5 ft²

Find the circumference of each circle.

23) area = 64π mi²

24) area = 16π in²

Find the area of each.

25) circumference = 6π yd

26) circumference = 22π in

Critical thinking question:

27) Find the radius of a circle so that its area and circumference have the same value.

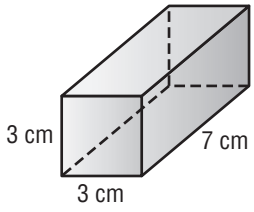
NAME _____ DATE _____ PERIOD _____

Lesson 4 Skills Practice

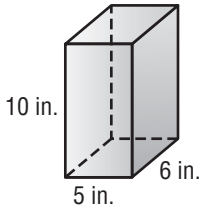
Volume of Prisms

Find the volume of each prism. Round to the nearest tenth if necessary.

1.



2.



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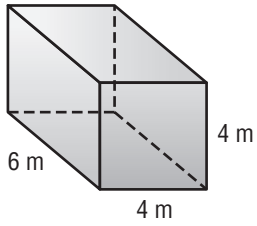

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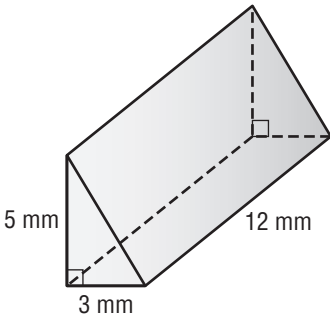

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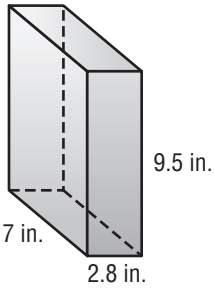

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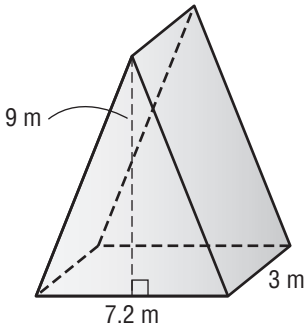

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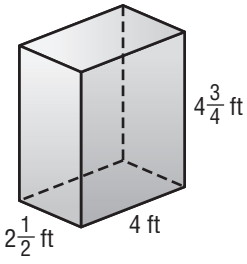

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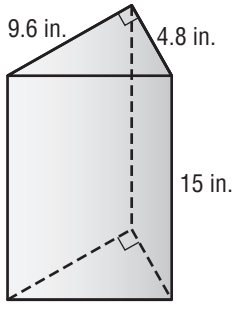

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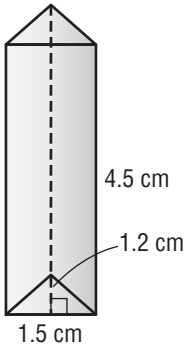


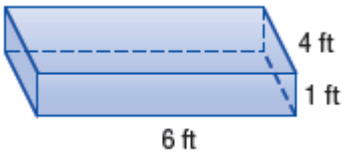
NAME _____ DATE _____ PERIOD _____

Lesson 4 Extra Practice

Volume of Prisms

Find the volume of each prism. Round to the nearest tenth if necessary.

1.



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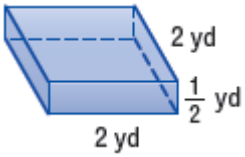

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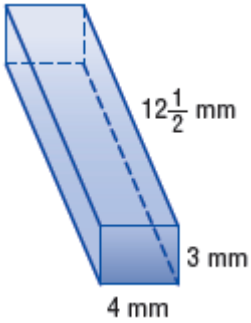
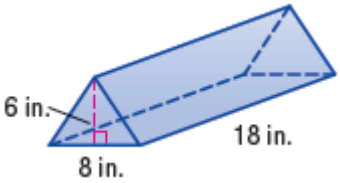
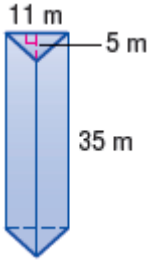


4.

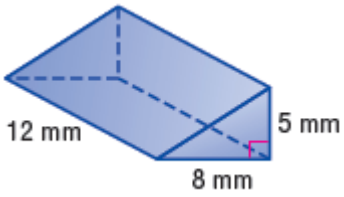
5.



6.



7.



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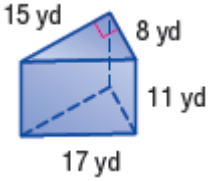


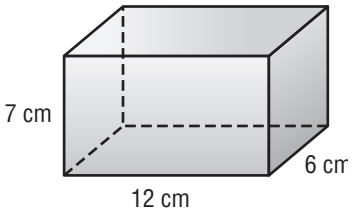
NAME _____ DATE _____ PERIOD _____

Lesson 6 Skills Practice

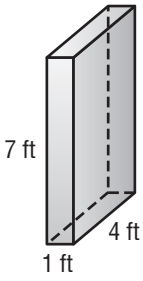
Surface Area of Prisms

Find the surface area of each prism. Round to the nearest tenth if necessary.

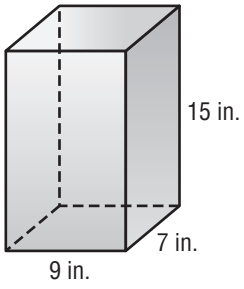
1.



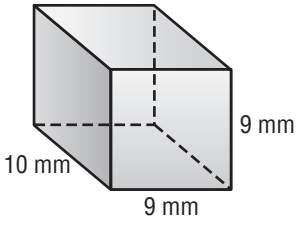
2.



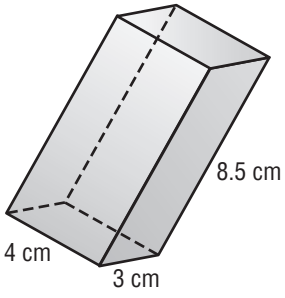
3.



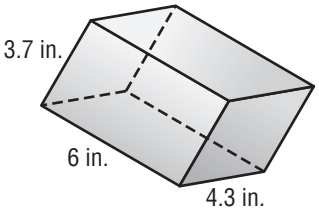
4.



5.



6.



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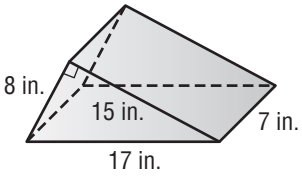
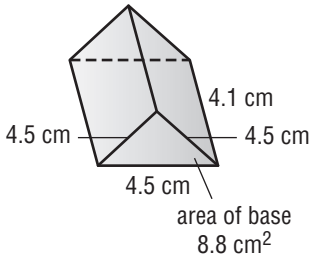
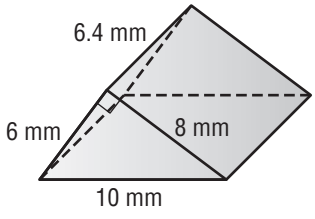


8.



9.



10. Find the surface area of a rectangular prism that has a length of 8 inches, a width of 3 inches, and a height of 6 inches.

11. Find the surface area of a triangular prism. The sides of the right triangular base measure 9 centimeters, 12 centimeters and 15 centimeters. The height of the prism is 20 centimeters.

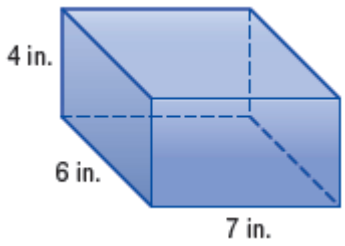
NAME _____ DATE _____ PERIOD _____

Lesson 6 Extra Practice

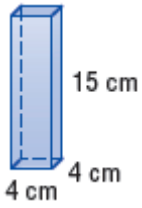
Surface Area of Prisms

Find the surface area of each prism. Round to the nearest tenth if necessary.

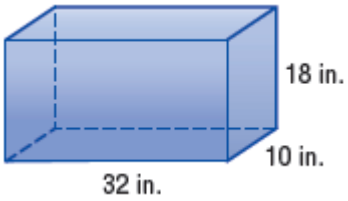
1.



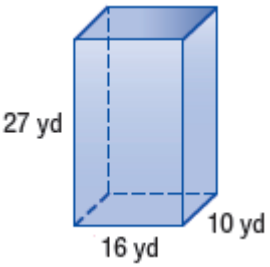
2.



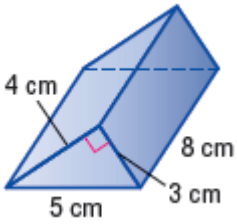
3.



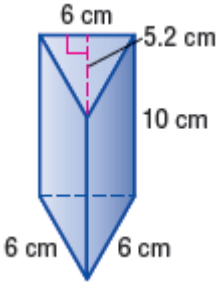
4.



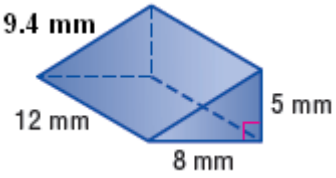
5.



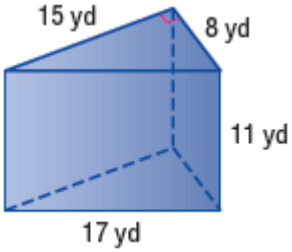
6.



7.



8.



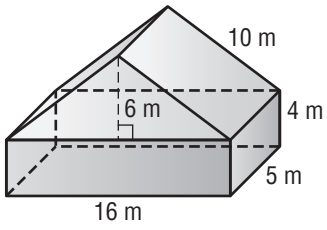
NAME _____ DATE _____ PERIOD _____

Lesson 8 Skills Practice

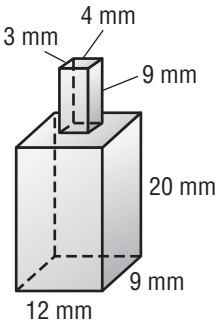
Volume and Surface Area of Composite Figures

Find the volume and surface area of each composite figure.

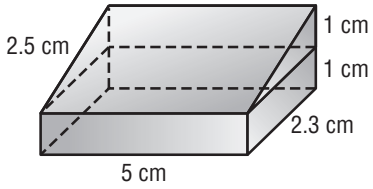
1.



2.

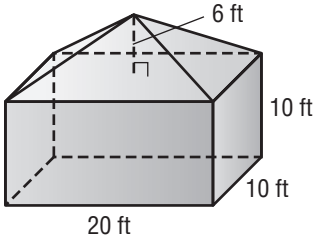


3.

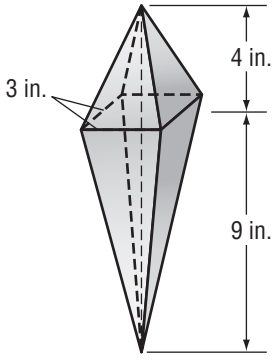


Find the volume of each composite figure.

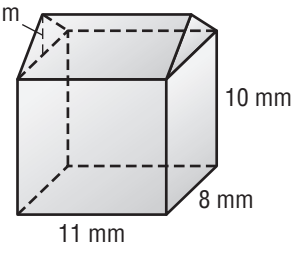
4.



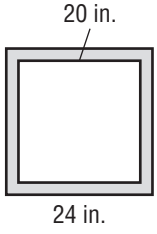
5.



6.



7. MULCH Marcus is putting a border of mulch around a tree. The figure shows the top view of the mulch. The mulch will be 3 inches deep. Find the volume of mulch.



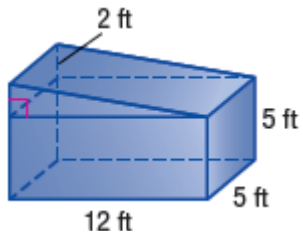
NAME _____ DATE _____ PERIOD _____

Lesson 8 Extra Practice

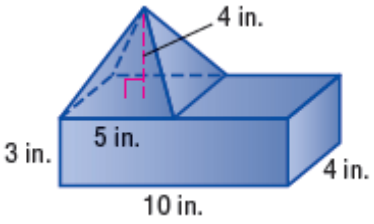
Volume and Surface Area of Composite Figures

Find the volume of each composite figure. Round to the nearest tenth if necessary.

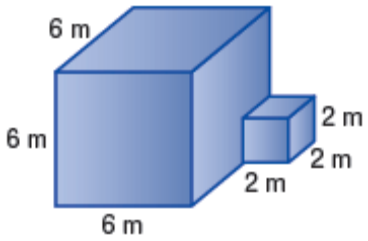
1.



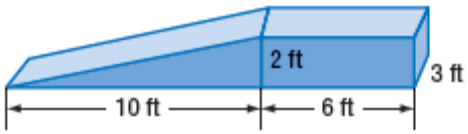
2.



3.

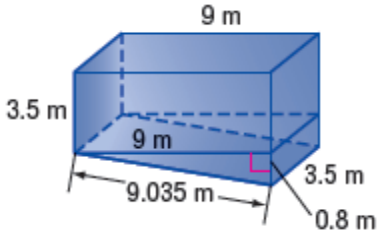


4.

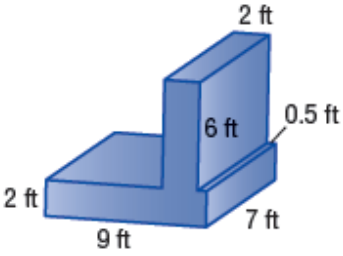


Find the surface area of each composite figure. Round to the nearest tenth if necessary.

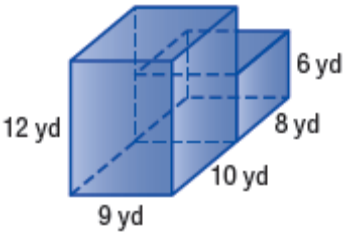
5.



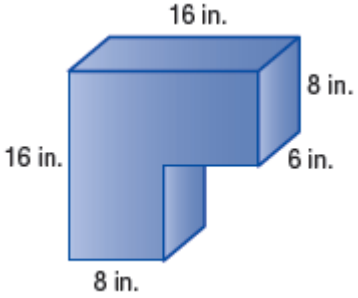
6.



7.



8.



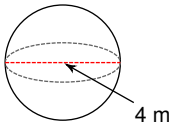
 Name_____

Surface Area of Solids

Date_____ Period____

Find the surface area of each figure. Round to the nearest tenth.

1)



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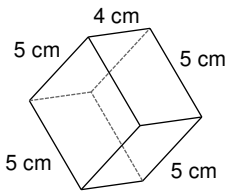
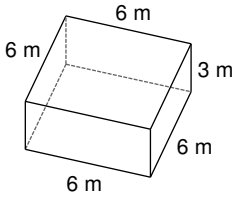
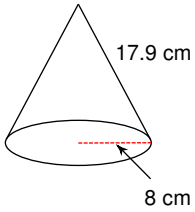


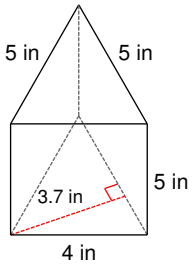
3)



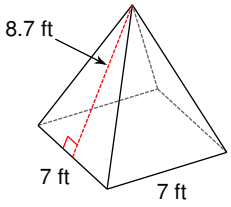
4)



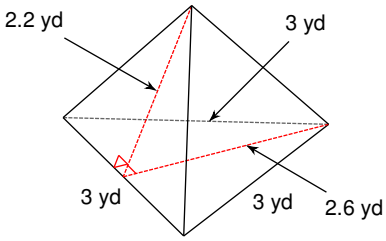
5)



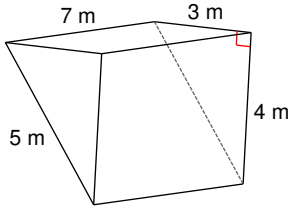
6)



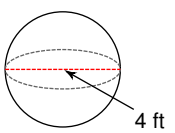
7)



8)



9)



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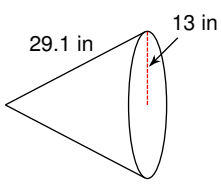
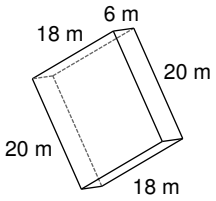
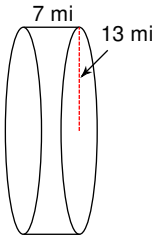


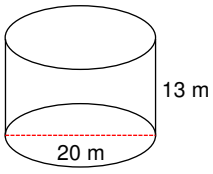
11)



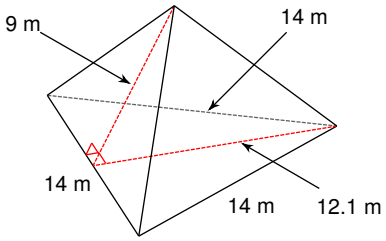
12)



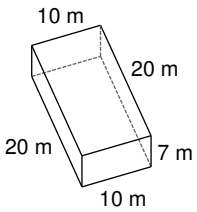
13)



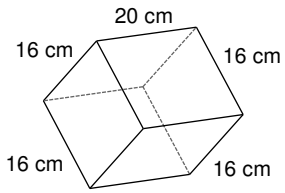
14)



15)



16)



17) A cone with diameter 10 in and a slant height of 13 in.

18) A square prism measuring 8 km along each edge of the base and 9 km tall.

19) A sphere with a diameter of 20 yd.

20) A square pyramid measuring 9 yd along the base with a slant height of 12.8 yd.