

Name _____

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Parent Signature _____ Date _____

Student Signature _____ Date _____

Teacher Signature _____ Date _____

Name _____ Class Period _____

Evaluation of Notes

Criteria	10 – Unsatisfactory	20 – Satisfactory	25 – Good	30 – Excellent	Score
Set-up and Neatness	<ul style="list-style-type: none"> No name Paper appears to have been scrunched, put through a blender, or used as a napkin 	<ul style="list-style-type: none"> Name Handwriting is hard to read. 	<ul style="list-style-type: none"> Name and class period Some extra notes added 	<ul style="list-style-type: none"> Name and class period Many extra notes added 	_____
Completion of practice	<ul style="list-style-type: none"> One or more sections are blank 	<ul style="list-style-type: none"> Some practice is not complete Not all work is shown 	<ul style="list-style-type: none"> All practice is complete Some work not shown 	<ul style="list-style-type: none"> All practice complete All work shown 	_____
Text marking	<ul style="list-style-type: none"> None of the notes are highlighted or underlined 	<ul style="list-style-type: none"> One or more sections are missing highlighting or underlining 	<ul style="list-style-type: none"> Each section contains highlighting or underlining. 	<ul style="list-style-type: none"> Every key point is highlighted or underlined and it is done so neatly. 	_____
Completed on time or within one day of being absent? +10 points!					_____
Total Score					_____


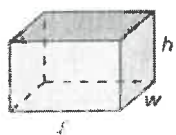
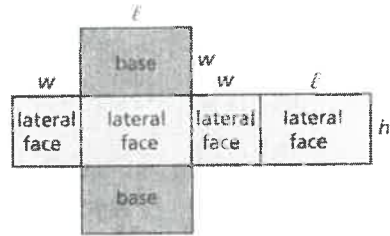


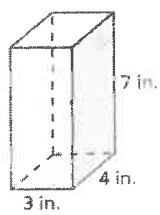
Evaluation of Homework

Criteria	0 – Unsatisfactory	30 – Satisfactory	40 – Good	50 – Excellent	Score
Set-up and Neatness	<ul style="list-style-type: none"> No name Paper appears to have been scrunched, put through a blender, or used as a napkin 	<ul style="list-style-type: none"> Name Handwriting is hard to read. 	<ul style="list-style-type: none"> Name and class period Some answers are boxed 	<ul style="list-style-type: none"> Name and class period All answers are boxed 	_____
Completion of practice	<ul style="list-style-type: none"> The homework is not done or attempted. 	<ul style="list-style-type: none"> Some problems are not done. Not all work is shown 	<ul style="list-style-type: none"> All practice is complete Some work not shown 	<ul style="list-style-type: none"> All practice complete All work shown 	_____
Total Score					_____

Name _____

Ms. Abadie's _____

Period _____

Chapter 9	Surface Area and Volume
MAFS.7.G.2	Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.
MAFS.7.G.2.6	Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.
Essential Question	How can you find the surface area of a prism? <i>In this lesson I am using what I know about area to find the surface area of prisms.</i>
<p>9.1 Surface Areas of Prisms</p>	<p> Key Idea</p> <p>Surface Area of a Rectangular Prism</p> <p>Words The surface area S of a rectangular prism is the sum of the areas of the bases and the lateral faces.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> </div> <p>Algebra $S = 2lw + 2lh + 2wh$</p> <div style="display: flex; justify-content: center; gap: 20px;"> <div style="text-align: center;"> <p>↑</p> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; width: 60px;">Areas of bases</div> </div> <div style="text-align: center;"> <p>↑</p> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; width: 60px;">Areas of lateral faces</div> </div> </div>
	<p> Key Idea</p> <p>Surface Area of a Prism</p> <p>The surface area S of any prism is the sum of the areas of the bases and the lateral faces.</p> <p style="text-align: center;">$S = \text{areas of bases} + \text{areas of lateral faces}$</p>
	<p>The lateral surface area of a prism is the sum of the areas of the lateral faces.</p>
	<p> Vocabulary and Concept Check</p> <ol style="list-style-type: none"> 1. VOCABULARY Describe two ways to find the surface area of a rectangular prism. 2. WRITING Compare and contrast a rectangular prism to a cube. 3. DIFFERENT WORDS, SAME QUESTION Which is different? Find "both" answers. <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="border: 1px solid gray; padding: 5px; width: 45%;">Find the surface area of the prism.</div> <div style="border: 1px solid gray; padding: 5px; width: 45%;">Find the area of the bases of the prism.</div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="border: 1px solid gray; padding: 5px; width: 45%;">Find the area of the net of the prism.</div> <div style="border: 1px solid gray; padding: 5px; width: 45%;">Find the sum of the areas of the bases and the lateral faces of the prism.</div> </div> <div style="text-align: right; margin-top: 10px;">  </div>



Use one-inch cubes to form a rectangular prism that has the given dimensions. Then find the surface area of the prism.

4. $1 \times 2 \times 3$

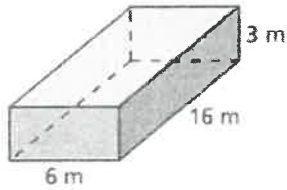
5. $3 \times 4 \times 1$

6. $2 \times 3 \times 2$

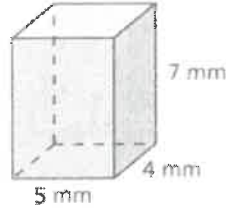
Homework
9.1 Practice A
#1-6

Find the surface area of the prism.

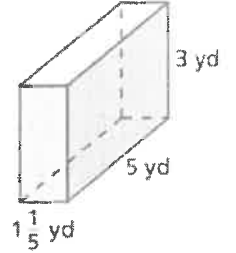
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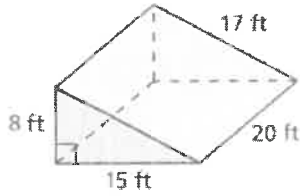
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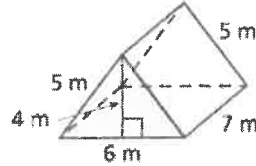
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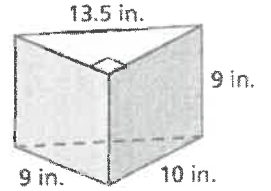
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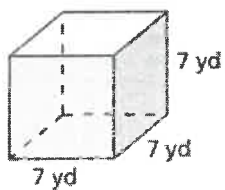
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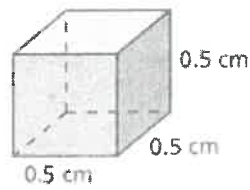
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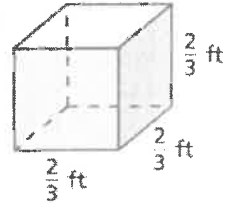
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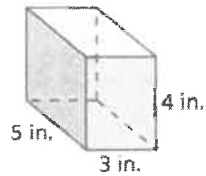
15.



16. ERROR ANALYSIS Describe and correct the error in finding the surface area of the prism.



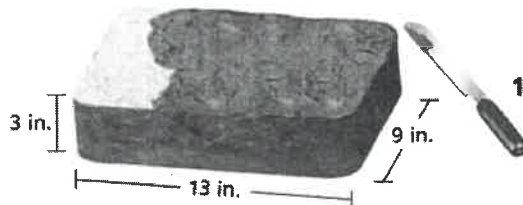
$$\begin{aligned}
 S &= 2(5)(3) + 2(3)(4) + 2(5)(3) \\
 &= 30 + 24 + 30 \\
 &= 84 \text{ in.}^2
 \end{aligned}$$



17. GAME Find the surface area of the tin game case.

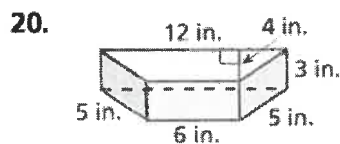


18. WRAPPING PAPER A cube-shaped gift is 11 centimeters long. What is the least amount of wrapping paper you need to wrap the gift?

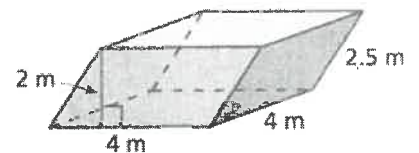


19. FROSTING One can of frosting covers about 280 square inches. Is one can of frosting enough to frost the cake? Explain.

Find the surface area of the prism.



21.



22. **OPEN-ENDED** Draw and label a rectangular prism that has a surface area of 158 square yards.

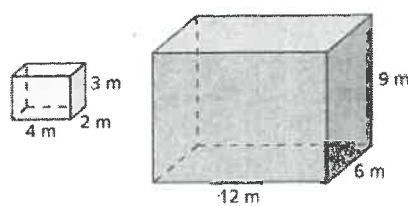
23. **LABEL** A label that wraps around a box of golf balls covers 75% of its lateral surface area. What is the value of x ?



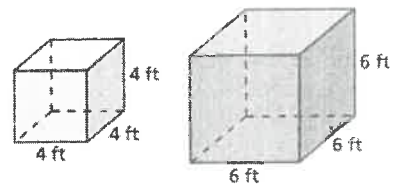
24. **BREAD** Fifty percent of the surface area of the bread is crust. What is the height h ?

Compare the dimensions of the prisms. How many times greater is the surface area of the red prism than the surface area of the blue prism?

25.



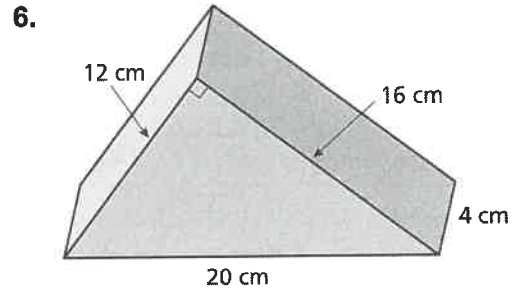
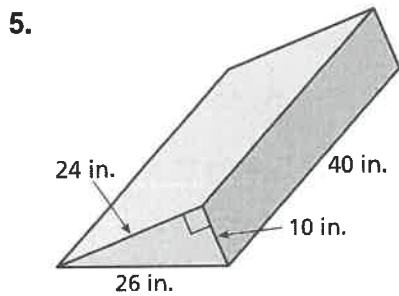
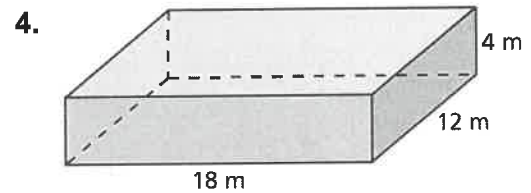
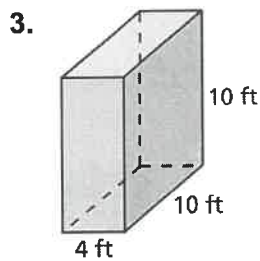
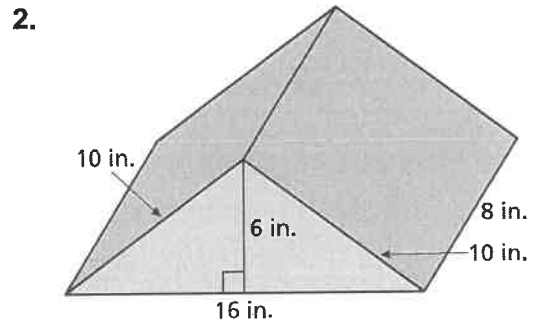
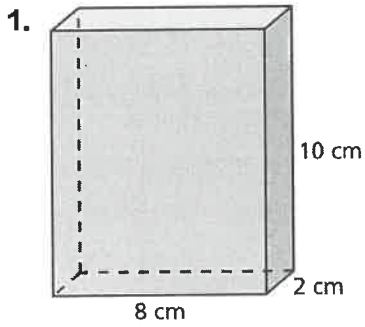
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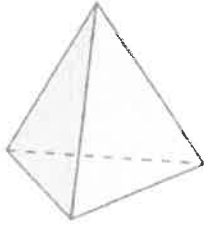
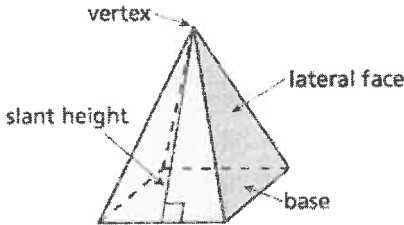
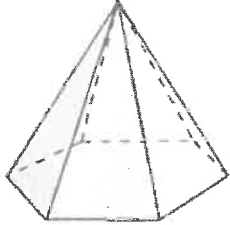

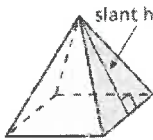
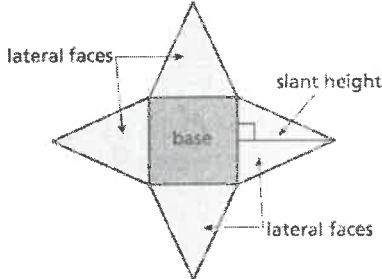

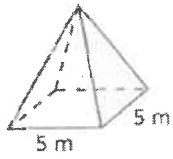
9.1

Practice A

Find the surface area of the prism.

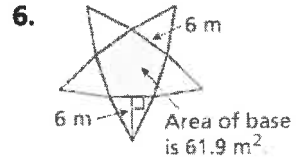
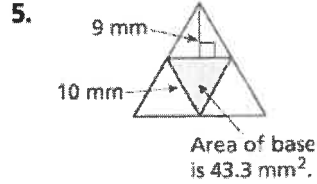
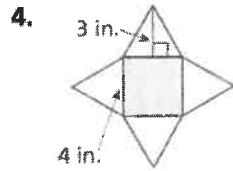


7. The inside of a baking pan is to be lined with tinfoil. The pan is 12 inches long, 9 inches wide, and 1.5 inches tall. How many square inches of tinfoil are needed?
8. Draw and label a rectangular prism that has a surface area of 96 square meters.

<p>MAFS.7.G.2 MAFS.7.G.2.6</p>	<p>Solve real-life and mathematical problems involving angle measure, area, surface area, and volume. Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.</p>
<p>Essential Question</p>	<p>How can you find the surface area of a pyramid? <i>In this lesson I am using what I know about area to find the surface area of pyramids.</i></p>
<p>9.2 Surface Areas of Pyramids</p>	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Triangular Base</p> </div> <div style="text-align: center;">  <p>Square Base</p> </div> <div style="text-align: center;">  <p>Hexagonal Base</p> </div> </div>
	<p>A regular pyramid is a pyramid whose base is a regular polygon. The lateral faces are triangles. The height of each triangle is the slant height of the pyramid.</p>
	<div style="border: 1px solid gray; padding: 10px;"> <p> Key Idea</p> <p>Surface Area of a Pyramid The surface area S of a pyramid is the sum of the areas of the base and the lateral faces.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> </div> <p style="text-align: center;">$S = \text{area of base} + \text{areas of lateral faces}$</p> </div>
	<p> Vocabulary and Concept Check</p> <ol style="list-style-type: none"> VOCABULARY Can a pyramid have rectangles as lateral faces? Explain. CRITICAL THINKING Why is it helpful to know the slant height of a pyramid to find its surface area? WHICH ONE DOESN'T BELONG? Which description of the solid does <i>not</i> belong with the other three? Explain your answer. <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="border: 1px solid gray; padding: 5px; width: 150px;">square pyramid</div> <div style="border: 1px solid gray; padding: 5px; width: 150px;">regular pyramid</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="border: 1px solid gray; padding: 5px; width: 150px;">rectangular pyramid</div> <div style="border: 1px solid gray; padding: 5px; width: 150px;">triangular pyramid</div> </div> <div style="text-align: right; margin-top: 20px;">  </div>

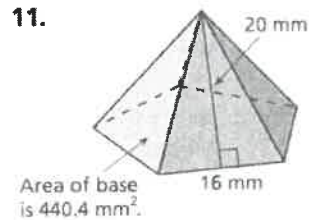
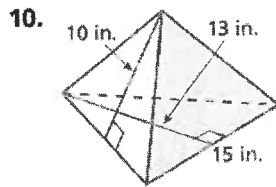
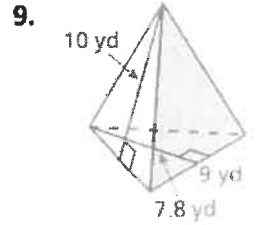
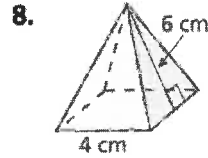
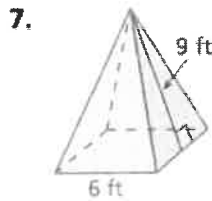
**Homework
9.2 Practice A
#1-2**

Use the net to find the surface area of the regular pyramid.



**Homework
9.2 Practice A
#3-4**

In Exercises 7–11, find the surface area of the regular pyramid.

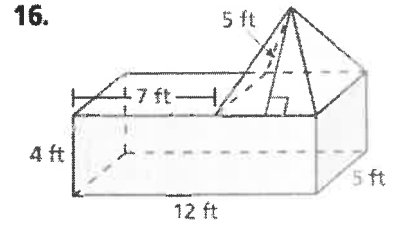
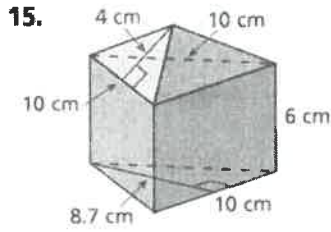
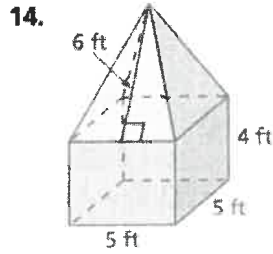


12. LAMPSHADE The base of the lampshade is a regular hexagon with a side length of 8 inches. Estimate the amount of glass needed to make the lampshade.

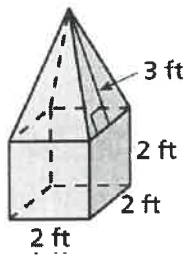


13. GEOMETRY The surface area of a square pyramid is 85 square meters. The base length is 5 meters. What is the slant height?

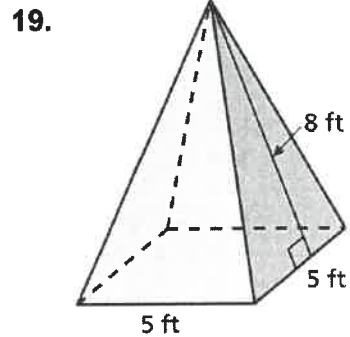
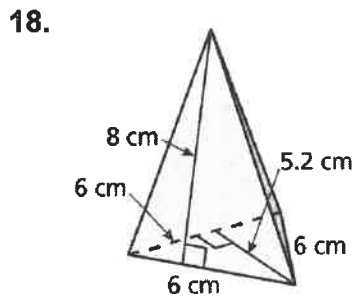
Find the surface area of the composite solid.



17. Find the surface area of the composite solid below.



Find the surface area of the regular pyramid.

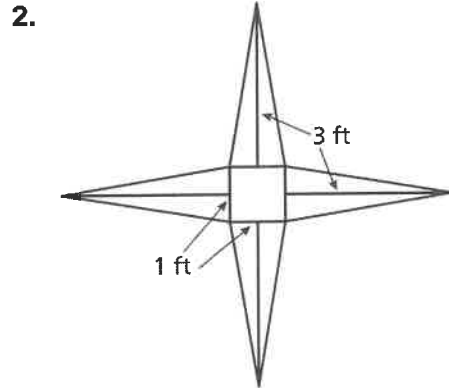
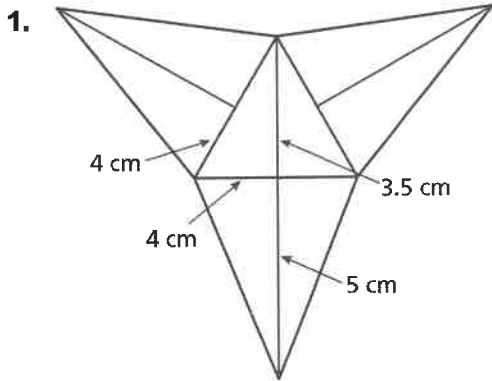


20. A playhouse is in the shape of a regular octagonal (8 walls) pyramid with a side length of 3 feet and a slant height of 12 feet. The wood used to build the walls (lateral-not including base) of the playhouse **costs \$3 per square foot**. What is the cost of the wood for the walls of the playhouse?

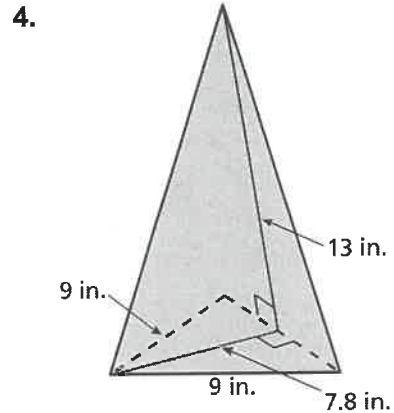
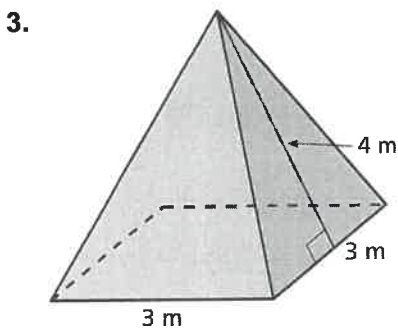
9.2

Practice A

Use the net to find the surface area of the regular pyramid.



Find the surface area of the regular pyramid.

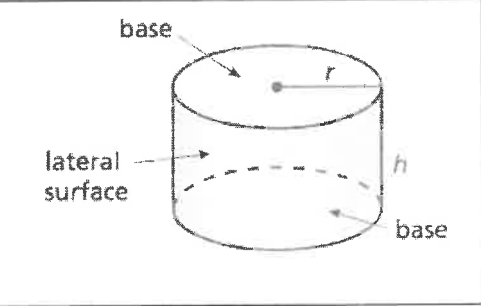


5. Your friend is purchasing an umbrella with a slant height of 4 feet. There are a variety of such umbrellas to choose from.
- A red umbrella is shaped like a regular pentagonal pyramid with a side length of 3 feet. Find the lateral surface area of the red umbrella.
 - A yellow umbrella is shaped like a regular hexagonal pyramid with a side length of 2.5 feet. Find the lateral surface area of the yellow umbrella.
 - A blue umbrella is shaped like a regular octagonal pyramid with a side length of 1.9 feet. Find the lateral surface area of the blue umbrella.
 - Based on lateral surface areas, would you suggest that your friend pick the umbrella that is her favorite color? Explain.

Essential Question How can you find the surface area of a cylinder?
In this lesson I will learn the formula for the surface area of a cylinder so I can find the surface area of a cylinder.

9.3 Surface Areas of Cylinders

A *cylinder* is a solid that has two parallel, identical circular bases.



Key Idea

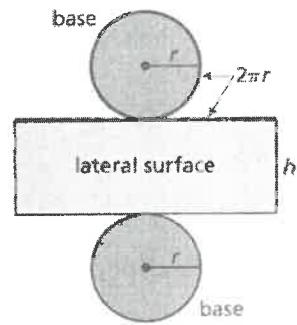
Surface Area of a Cylinder

Words The surface area S of a cylinder is the sum of the areas of the bases and the lateral surface.

Algebra $S = 2\pi r^2 + 2\pi rh$

↑ ↑

Areas of bases Area of lateral surface



Vocabulary and Concept Check

- CRITICAL THINKING** Which part of the formula $S = 2\pi r^2 + 2\pi rh$ represents the lateral surface area of a cylinder?
- CRITICAL THINKING** You are given the height and the circumference of the base of a cylinder. Describe how to find the surface area of the entire cylinder.

Homework 9.3 Practice A #1-2

Make a net for the cylinder. Then find the surface area of the cylinder. Round your answer to the nearest tenth.

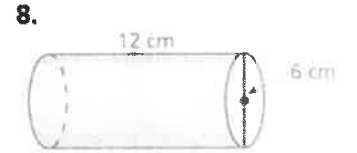
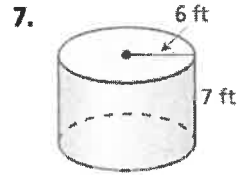
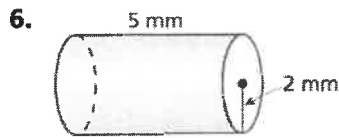
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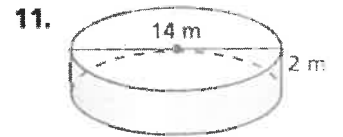
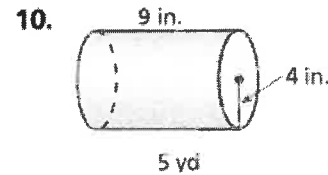
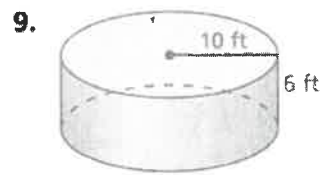
**Homework
9.3 Practice A
#3-4**

Find the surface area of the cylinder. Round your answer to the nearest tenth.

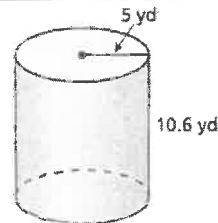


**Homework
9.3 Practice A
#5-6**

Find the lateral surface area of the cylinder. Round your answer to the nearest tenth.



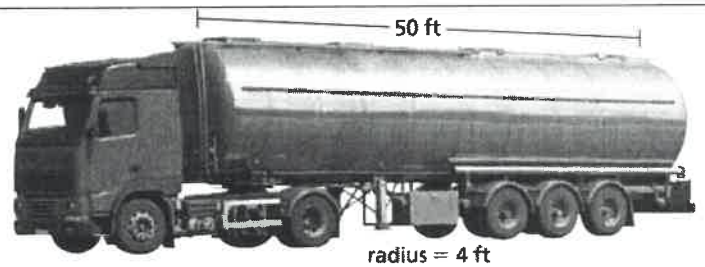
12. **ERROR ANALYSIS** Describe and correct the error in finding the surface area of the cylinder.



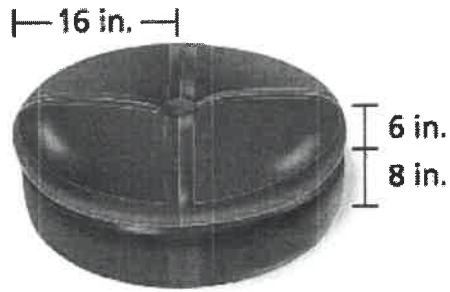
X

$$\begin{aligned}
 S &= \pi r^2 + 2\pi rh \\
 &= \pi(5)^2 + 2\pi(5)(10.6) \\
 &= 25\pi + 106\pi \\
 &= 131\pi \approx 411.3 \text{ yd}^2
 \end{aligned}$$

13. **TANKER** The truck's tank is a stainless steel cylinder. Find the surface area of the tank.

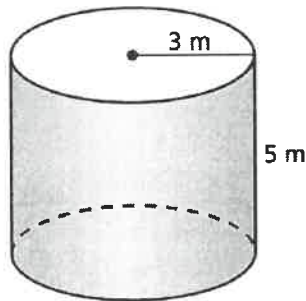


14. **OTTOMAN** What percent of the surface area of the ottoman is green (not including the bottom)?

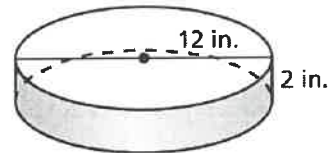


Find the surface area of the cylinder. Round your answer to the nearest tenth.

15.



16.



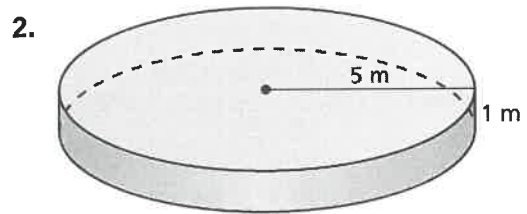
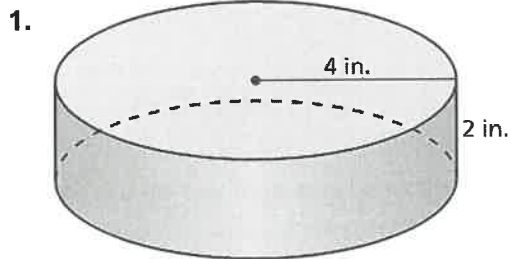
17. Find the lateral surface area of the instant oatmeal container. Round your answer to the nearest tenth.



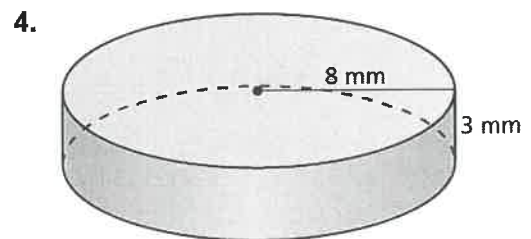
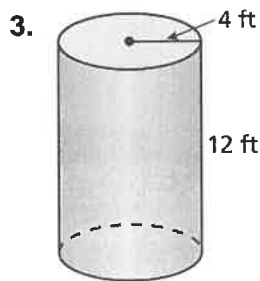
9.3

Practice A

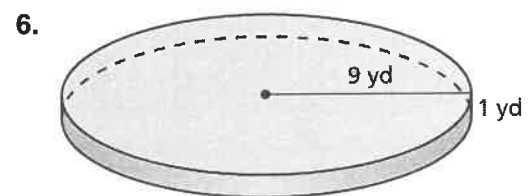
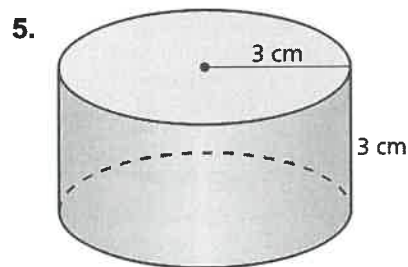
Make a net for the cylinder. Then find the surface area of the cylinder. Round your answer to the nearest tenth.




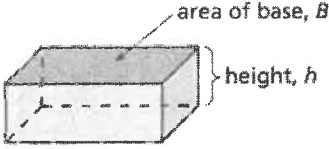
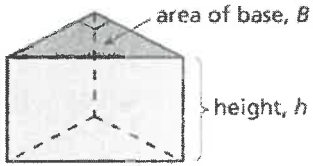

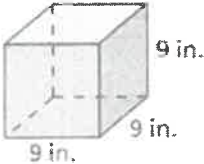
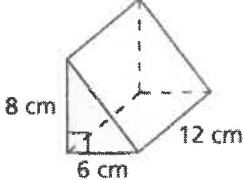
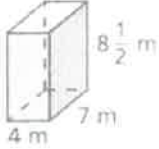
Find the surface area of the cylinder. Round your answer to the nearest tenth.

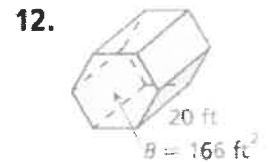
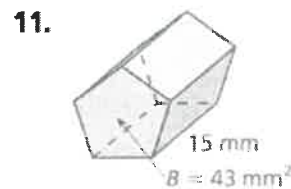
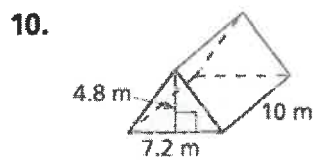
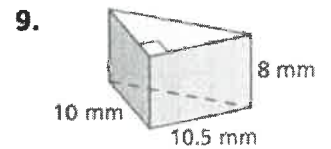
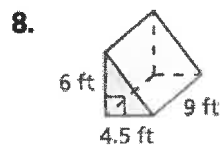
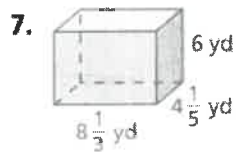


Find the lateral surface area of the cylinder. Round your answer to the nearest tenth.

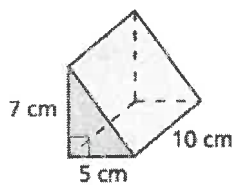


7. A deep dish pizza has a radius of 6 inches and a height of 1 inch. Find the surface area of the pizza. Round your answer to the nearest tenth.

<p>MAFS.7.G.2</p> <p>MAFS.7.G.2.6</p>	<p>Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.</p> <p>Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.</p>
<p>Essential Question</p>	<p>How can you find the volume of a prism? <i>In this lesson I will learn how to use multiplication to find the volume of a prism.</i></p>
<p>9.4 Volumes of Prisms</p>	<p>The <i>volume</i> of a three-dimensional figure is a measure of the amount of space that it occupies. Volume is measured in cubic units.</p>
	<p> Key Idea</p> <p>Volume of a Prism</p> <p>Words The volume V of a prism is the product of the area of the base and the height of the prism.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> </div> <p>Algebra $V = Bh$</p> <div style="display: flex; justify-content: center; gap: 100px; margin-top: 10px;"> <div style="border: 1px solid gray; border-radius: 10px; padding: 5px 20px;">Area of base</div> <div style="text-align: center;"> $\uparrow \uparrow$ </div> <div style="border: 1px solid gray; border-radius: 10px; padding: 5px 20px;">Height of prism</div> </div>
	<p> Vocabulary and Concept Check</p> <ol style="list-style-type: none"> 1. VOCABULARY What types of units are used to describe volume? 2. VOCABULARY Explain how to find the volume of a prism. 3. CRITICAL THINKING How are volume and surface area different?
<p>Homework</p> <p>9.4 Practice A</p> <p>#1-6</p>	<p>Find the volume of the prism.</p> <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div style="width: 30%;"> <p>4. </p> </div> <div style="width: 30%;"> <p>5. </p> </div> <div style="width: 30%;"> <p>6. </p> </div> </div>

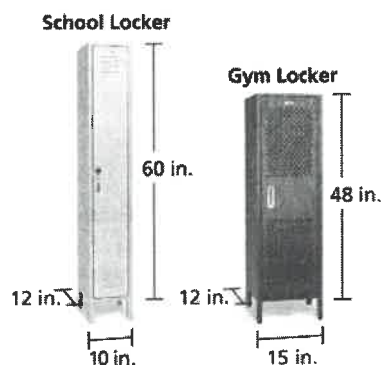


13. **ERROR ANALYSIS** Describe and correct the error in finding the volume of the triangular prism.



~~$$\begin{aligned} V &= Bh \\ &= 10(5)(7) \\ &= 50 \cdot 7 \\ &= 350 \text{ cm}^3 \end{aligned}$$~~

14. **LOCKER** Each locker is shaped like a rectangular prism. Which has more storage space? Explain.

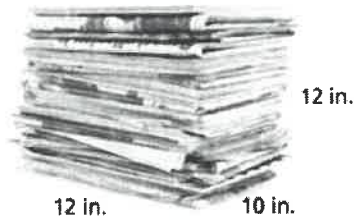


Homework
9.4 Practice A
#7

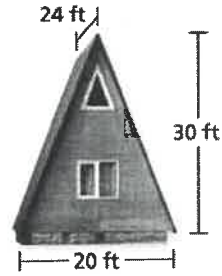
15. **CEREAL BOX** A cereal box is 9 inches by 2.5 inches by 10 inches. What is the volume of the box?

Find the volume of the prism.

16.

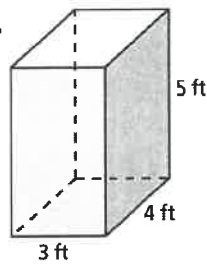


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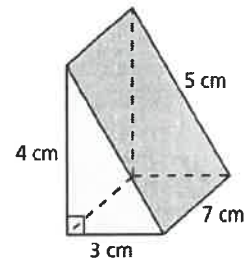


Find the surface area and volume of the prism.

17.



18.



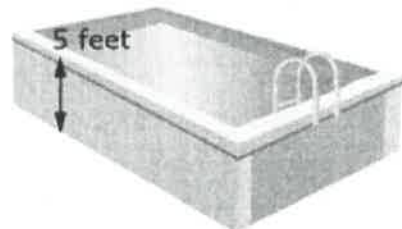
The surface area of a cube is 6 square centimeters. What is its volume, in cubic centimeters?

A cube with a surface area of 96 square centimeters is shown.

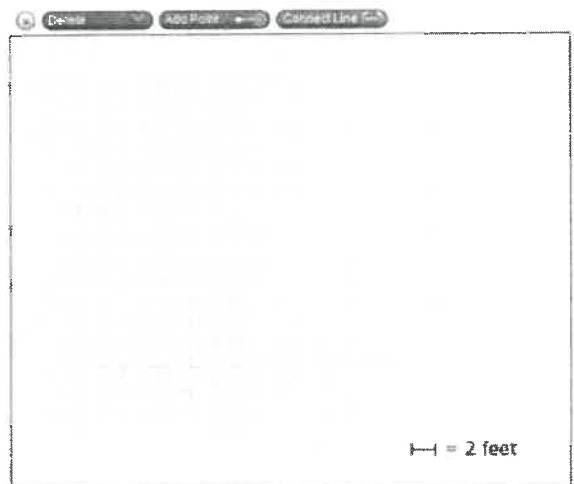


Eight cubes like the one shown are combined to create a larger cube. What is the volume, in cubic centimeters, of the new cube?

Mitzi has a rectangular swimming pool. She fills it with water to a depth of 5 feet. The water has a volume of 1200 cubic feet.



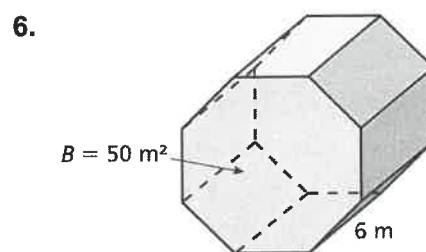
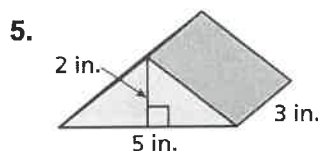
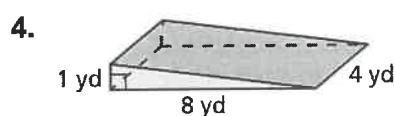
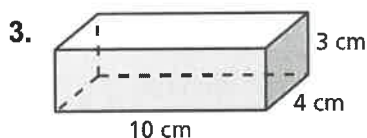
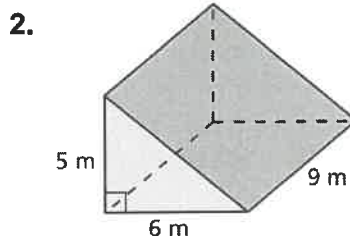
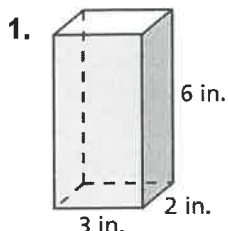
Use the Connect Line tool to draw a rectangle that represents the possible dimensions of the swimming pool.



9.4

Practice A

Find the volume of the prism.




7. A cell phone is in the shape of a rectangular prism, with a length of 4 inches, a width of 2 inches, and a height of 1 inch. What is the volume of the cell phone?
8. A recycle bin is in the shape of a trapezoidal prism. The area of the base is 220 square inches and the height is 24 inches. What is the volume of the recycle bin?
9. A water jug is in the shape of a prism. The area of the base is 100 square inches and the height is 20 inches. How many gallons of water will the water jug hold? ($1 \text{ gal} = 231 \text{ in.}^3$) Round your answer to the nearest tenth.

<p>MAFS.7.G.2</p> <p>MAFS.7.G.2.6</p>	<p>Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.</p> <p>Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.</p>
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<p>Essential Question</p>	<p>How can you find the volume of a pyramid? <i>In this lesson I will learn how to find the volume of a pyramid using a formula.</i></p>
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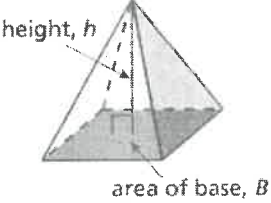
9.5 Volumes of Pyramids

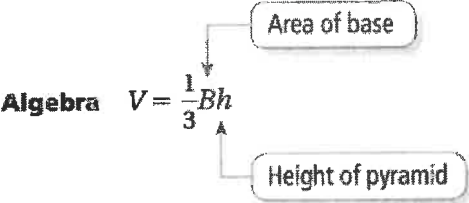
 **Key Idea**


Volume of a Pyramid

Words The volume V of a pyramid is one-third the product of the area of the base and the height of the pyramid.

Algebra $V = \frac{1}{3}Bh$



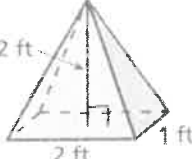


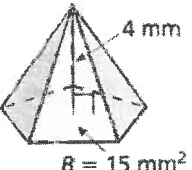
 **Vocabulary and Concept Check**

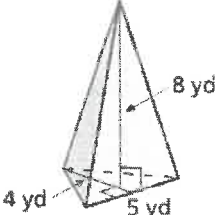
- 1. WRITING** How is the formula for the volume of a pyramid different from the formula for the volume of a prism?
- 2. OPEN-ENDED** Describe a real-life situation that involves finding the volume of a pyramid.
- 3. REASONING** A triangular pyramid and a triangular prism have the same base and height. The volume of the prism is how many times the volume of the pyramid?

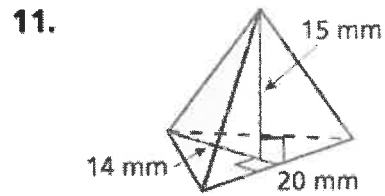
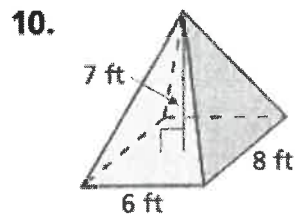
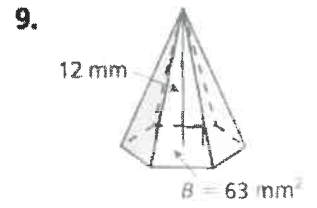
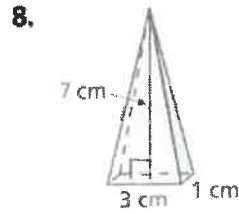
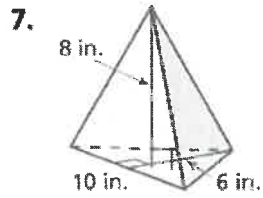
Homework
9.5 Practice A
#1-4

Find the volume of the pyramid.

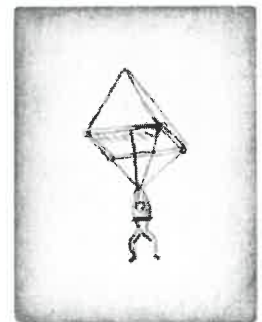
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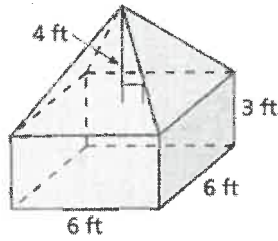
12. **PARACHUTE** In 1483, Leonardo da Vinci designed a parachute. It is believed that this was the first parachute ever designed. In a notebook, he wrote, "If a man is provided with a length of gummed linen cloth with a length of 12 yards on each side and 12 yards high, he can jump from any great height whatsoever without injury." Find the volume of air inside Leonardo's parachute.



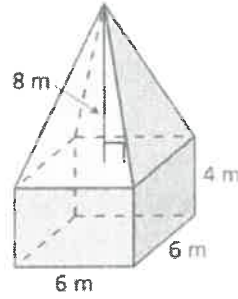
Not drawn to scale

Find the volume of the composite solid.

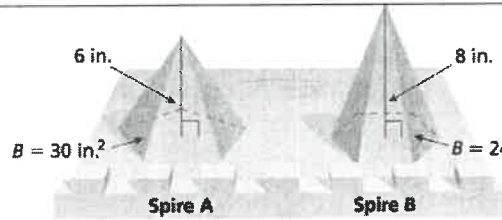
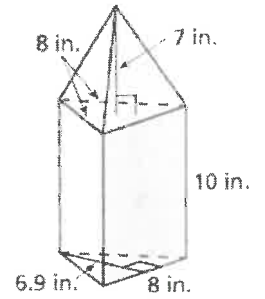
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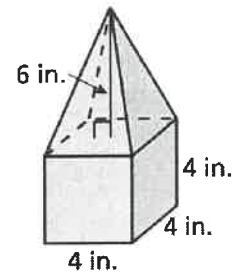


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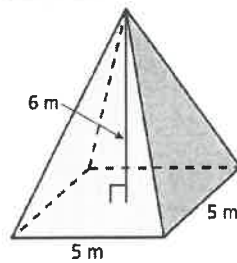
16. SPIRE Which sand-castle spire has a greater volume? How much more sand do you need to make the spire with the greater volume?

17. Find the volume of the composite solid below.

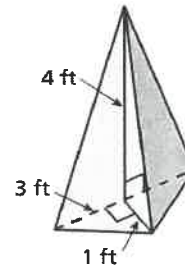


Find the volume of the regular pyramid.

18.



19.

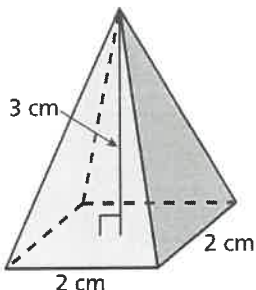


9.5

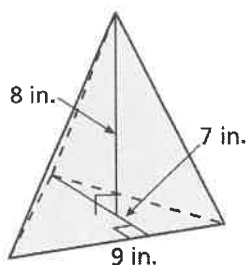
Practice A

Find the volume of the pyramid.

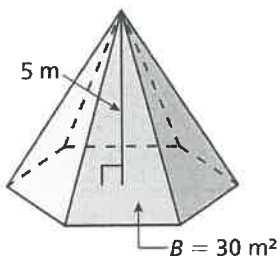
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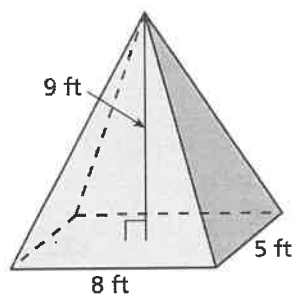
2.



3.



4.

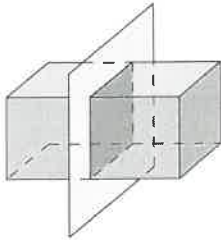


5. A tent is in the shape of a pyramid. The base is a rectangle with a length of 12 feet and a width of 10 feet. The height of the tent is 8 feet. Find the volume of the tent.
6. A sign made of solid wood is in the shape of a pyramid. The base is a triangle with a base of 6 feet and a height of 4 feet. The height of the sign is 7 feet. The wood costs \$3 per cubic foot. What is the cost of the sign?
7. Two pyramids with square bases have the same volume. One pyramid has a height of 6 centimeters and the area of the base is 36 square centimeters.
 - a. What is the volume of the pyramids?
 - b. The base of the other pyramid has a side length of 3 centimeters. What is the height of this pyramid?
8. How does the volume of a pyramid change when the height is halved?

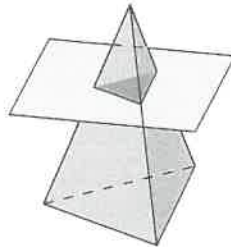
Extension
9.5 Practice

Describe the intersection of the plane and the solid.

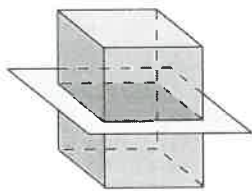
1.



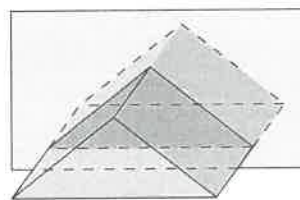
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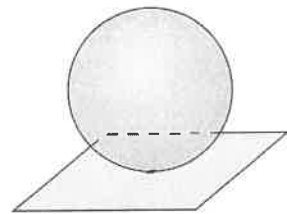
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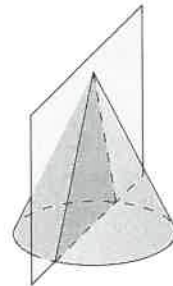
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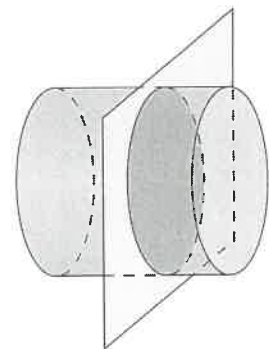
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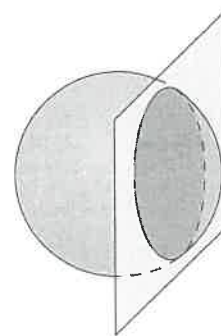
6.



7.



8.

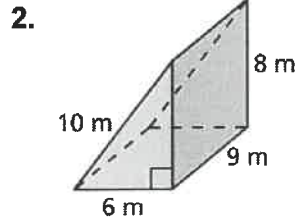
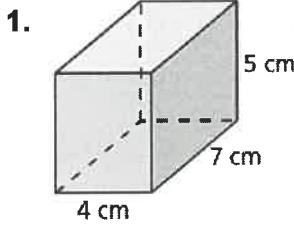


Chapter 9

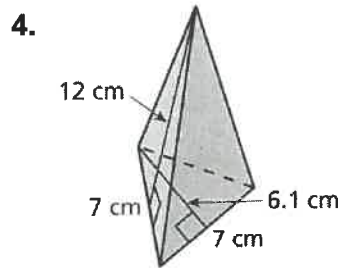
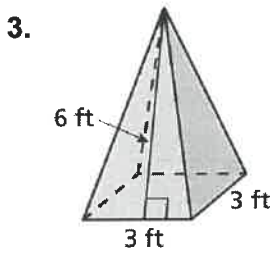
Take Home Quiz #1

For use after Section 9.3

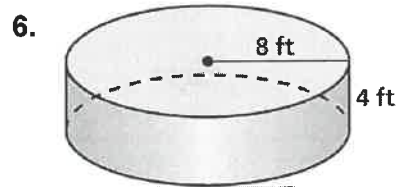
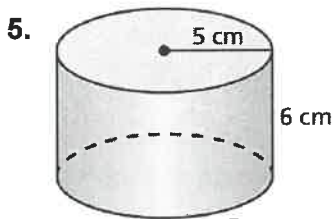
Find the surface area of the prism.



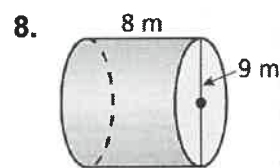
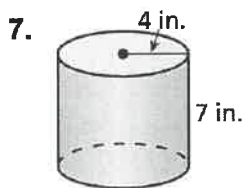
Find the surface area of the regular pyramid.



Find the surface area of the cylinder. Round your answer to the nearest tenth.



Find the lateral surface area of the cylinder. Round your answer to the nearest tenth.



9. The surface area of a square pyramid is 136 square inches. The base length is 4 inches. What is the slant height?

10. You buy two rolls of wrapping paper. Each roll has the same lateral surface area. What is the diameter of Roll B?

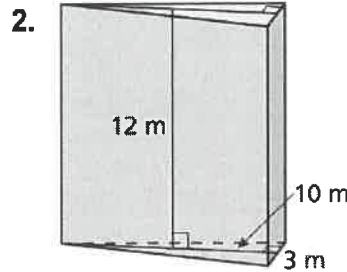
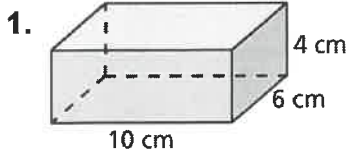


Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Chapter 9 **Take Home Quiz #2**
For use after Section 9.5

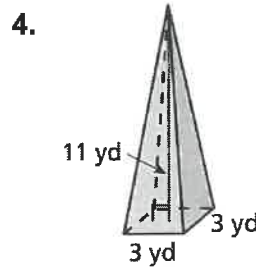
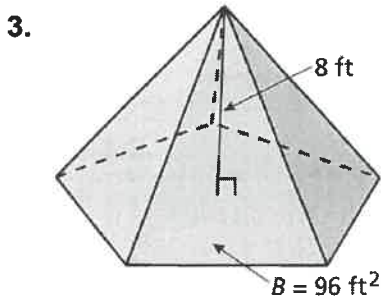
Find the volume of the prism.



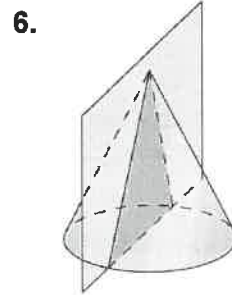
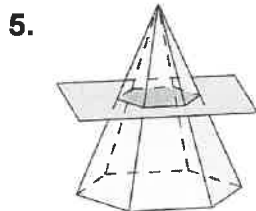
Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. a. _____
- b. _____
- c. _____
- _____
- _____

Find the volume of the solid. Round your answer to the nearest tenth, if necessary.

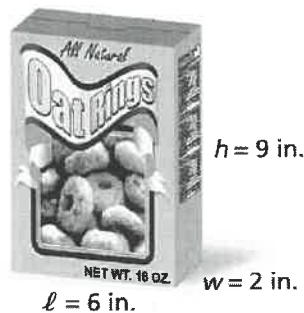


Describe the intersection of the plane and the solid.



7. A hexagonal pyramid has a volume of 144 cubic millimeters and a height of 4 millimeters. What is the area of the base of the pyramid?

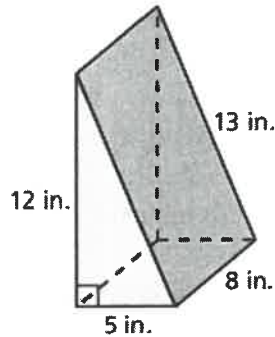
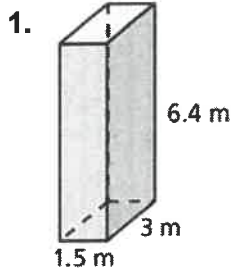
8. A box of cereal is shown.
- a. Find the volume of the box of cereal.
 - b. Find the volume of the box when the width is doubled.
 - c. How does doubling the width affect its volume?



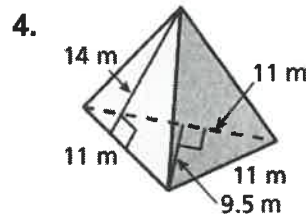
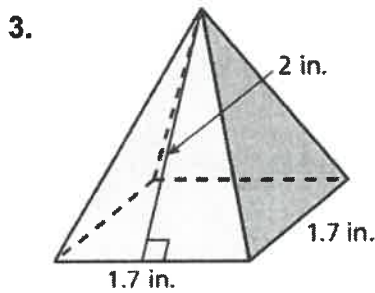
Chapter 9

Ms. Abadie's Test Review

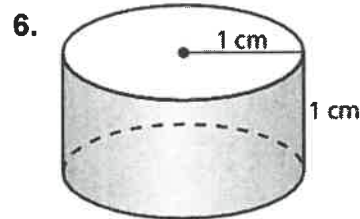
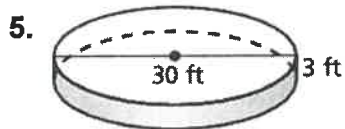
Find the surface area and volume of the prism.



Find the surface area of the regular pyramid. Round your answer to the nearest tenth.



Find the surface area of the cylinder. Round your answer to the nearest tenth.



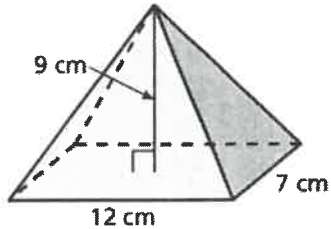
7. Find the lateral surface area of the paint can. Round your answer to the nearest hundredth.



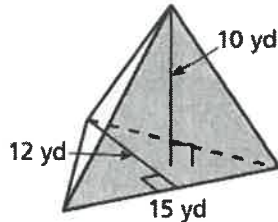
**Chapter
9**

Find the volume of the regular pyramid.

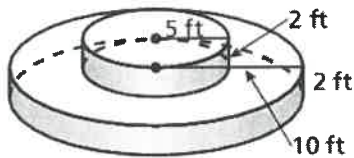
8.



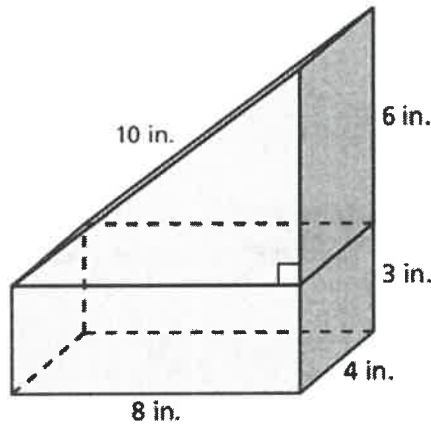
9.



10. Find the surface area of the composite solid below.



11. Find the volume of the composite solid below.



12. The volume of a pyramid is 84 cubic feet. The area of the base is 21 square feet. Find the height of the pyramid.

13. What happens to the volume of a rectangular prism when the length and width are doubled and the height is tripled?

14. The solids have the same volume. What is the height of the pyramid? Explain.

