



**THIRD SPACE
LEARNING**

Pyramid Shape Worksheet

Geometry

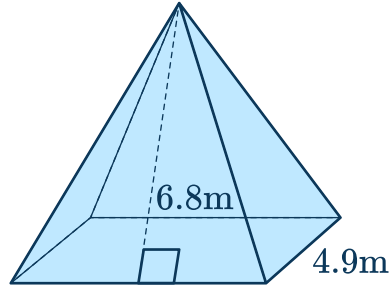
Grades 6 to 8

Skill Questions

Name:

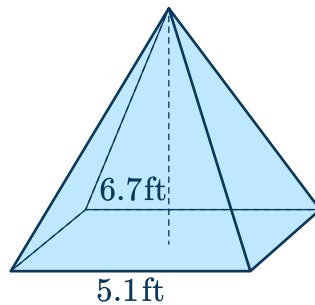
Date:

- 1 What is the surface area of the square pyramid?



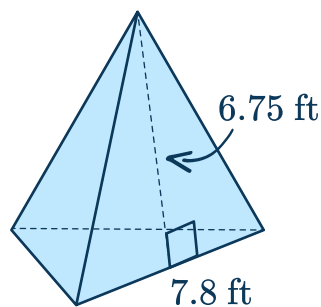
Answer

- 2 What is the volume of the square pyramid?



Answer

- 3 The pyramid is made of equilateral triangles. What is the surface area of the triangular pyramid?



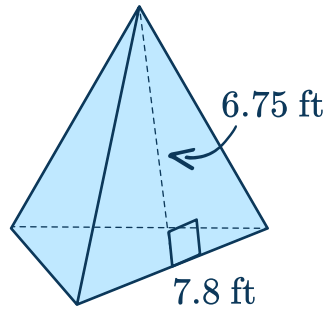
Answer

Skill Questions

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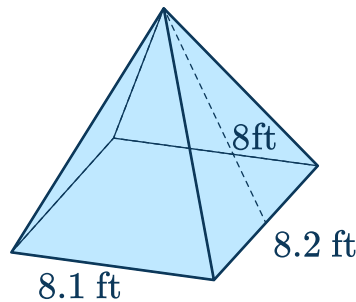
Date:

- 4 The pyramid is made of equilateral triangles. The height of the pyramid is 5.9 ft. What is the volume of the triangular pyramid? Round to the nearest tenth.



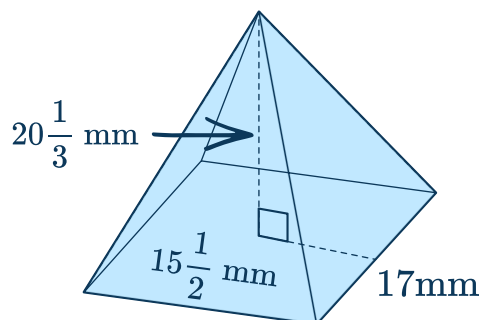
Answer

- 5 What is the surface area of the rectangular pyramid?



Answer

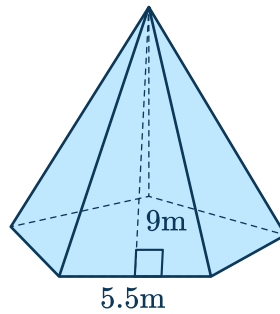
- 6 What is the volume of the rectangular pyramid?



Answer

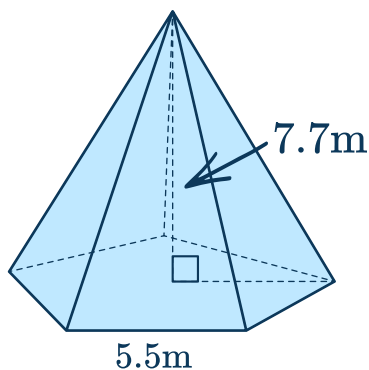
Pyramid Shape Worksheet | Grades 6 to 8

- 7 The base of the prism is a regular pentagon with an area of $52.04m^2$. What is the surface area of the pyramid?



Answer

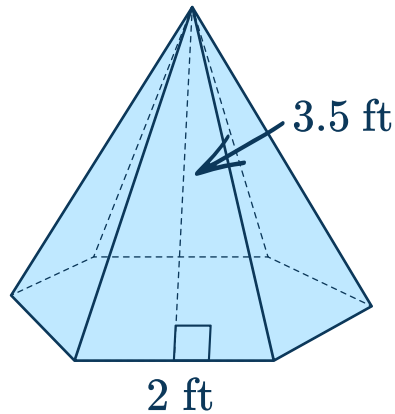
- 8 The base of the prism is a regular pentagon with an area of $52.04m^2$. What is the volume of the pyramid rounded to the nearest hundredth?



Answer

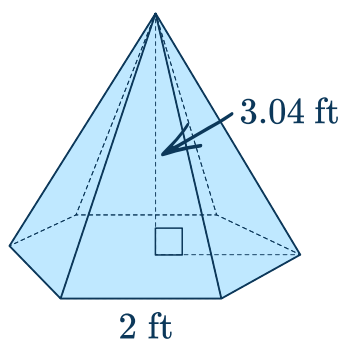
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- 9 The base of the prism is a regular hexagon with an area of 10.39 ft^2 . What is the surface area of the pyramid?



Answer

- 10 The base of the prism is a regular hexagon with an area of 10.39 ft^2 . What is the volume of the pyramid rounded to the nearest hundredth?

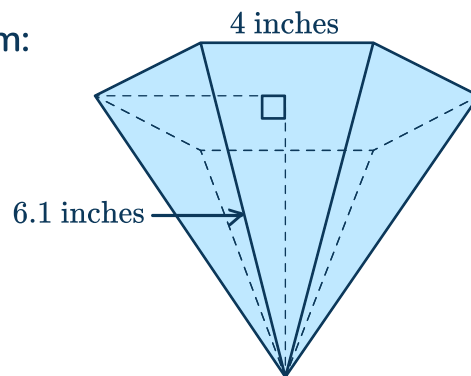


Answer

Applied Questions

- 11 Jason is working on a project for art class and needs to fill two pyramids with plaster. The base of the first pyramid is a regular hexagon with an area of 41.57 inches^2 .

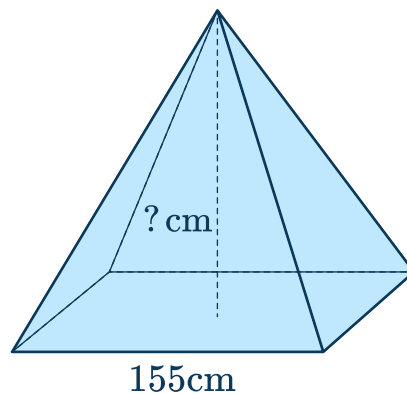
First prism:



The second prism is double the size of the first. How many inches^3 of plaster is needed to fill both pyramids?

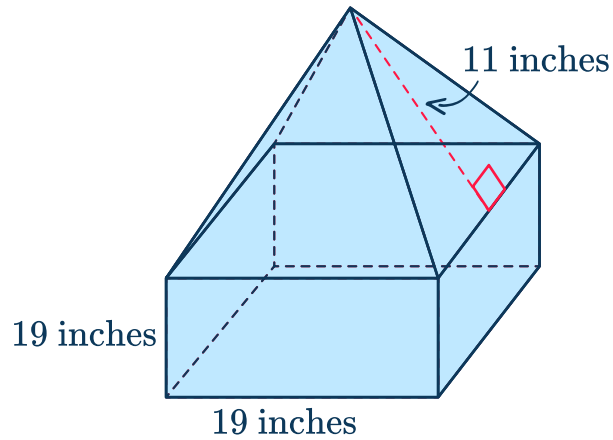
Answer

- 12 The total volume is $1,633,700 \text{ cm}^3$. Find the missing dimension.



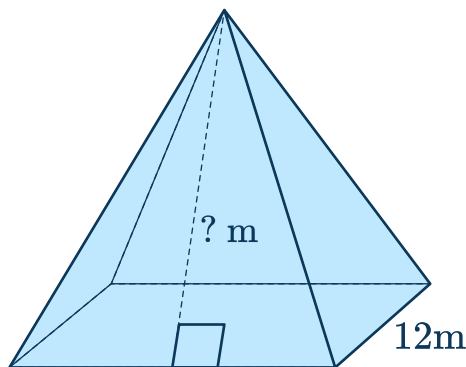
Answer

- 13 Sylvia is painting the roof of bird houses. The paint costs \$0.18 per square foot. How much money will Sylvia spend to paint the roof of 100 bird houses?



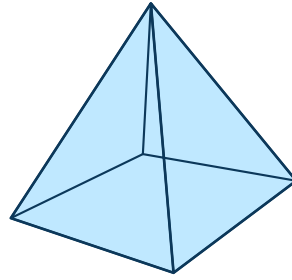
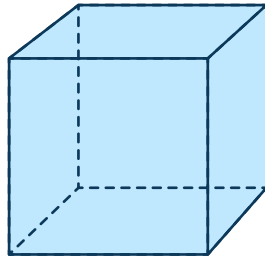
Answer

- 14 The total surface area is $312m^2$. Find the missing dimension.



Answer

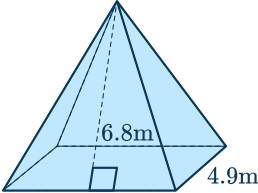
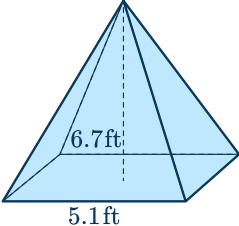
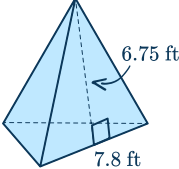
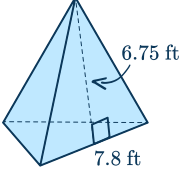
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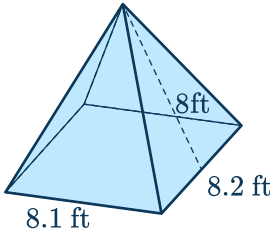
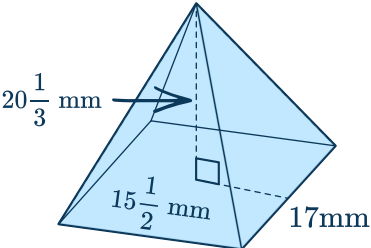
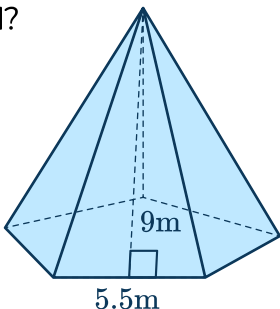
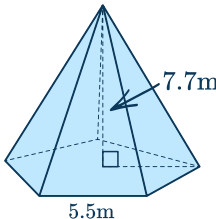
State the volume formulas for each shape and explain them within the context of the shape.

Answer

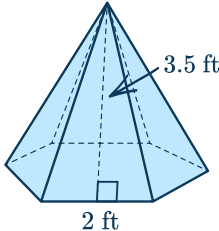
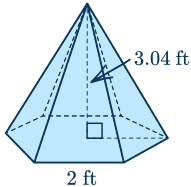
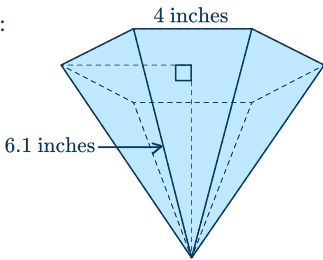
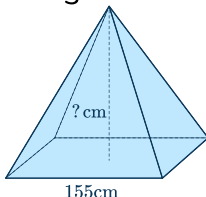
Answers

Question number	Question	Answers	Standard
1	What is the surface area of the square pyramid? 	90.65 m^2	6.G.A.4 7.G.B.6
2	What is the volume of the square pyramid? 	58.089 ft^3	7.G.B.6
3	The pyramid is made of equilateral triangles. What is the surface area of the triangular pyramid? 	105.3 ft^2	6.G.A.4 7.G.B.6
4	The pyramid is made of equilateral triangles. The height of the pyramid is 5.9 ft. What is the volume of the triangular pyramid? Round to the nearest tenth. 	59.8 ft^3	7.G.B.6

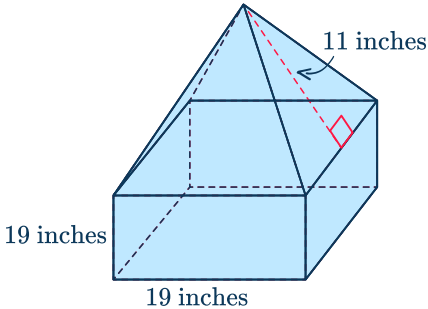
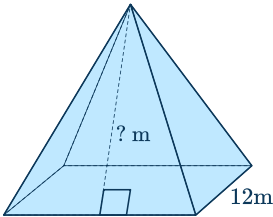
Pyramid Shape Worksheet | Grades 6 to 8 | Answers

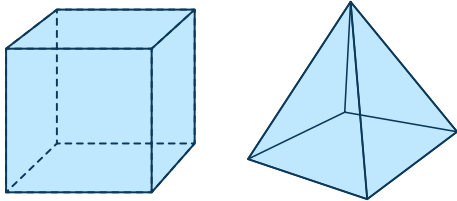
Question number	Question	Answers	Standard
5	<p>What is the surface area of the rectangular pyramid?</p> 	197.62 ft^2	6.G.A.4 7.G.B.6
6	<p>What is the volume of the rectangular pyramid?</p> 	$1785 \frac{17}{18} \text{ mm}^3$	7.G.B.6
7	<p>The base of the prism is a regular pentagon with an area of 52.04 m^2. What is the surface area of the pyramid?</p> 	175.79 m^2	7.G.B.6
8	<p>The base of the prism is a regular pentagon with an area of 52.04 m^2. What is the volume of the pyramid rounded to the nearest hundredth?</p> 	133.57 m^3	7.G.B.6

Pyramid Shape Worksheet | Grades 6 to 8 | Answers

Question number	Question	Answers	Standard
9	<p>The base of the prism is a regular hexagon with an area of 10.39 ft^2. What is the surface area of the pyramid?</p> 	31.39 ft^2	7.G.B.6
10	<p>The base of the prism is a regular hexagon with an area of 10.39 ft^2. What is the volume of the pyramid rounded to the nearest hundredth?</p> 	10.53 ft^3	7.G.B.6
11	<p>Jason is working on a project for art class and needs to fill two pyramids with plaster. The base of the first pyramid is a regular hexagon with an area of 41.57 inches^2.</p> <p>First prism:</p>  <p>The second prism is double the size of the first. How many inches^3 of plaster is needed to fill both pyramids?</p>	253.577 inches^3	7.G.B.6
12	<p>The total volume is $1,633,700 \text{ cm}^3$. Find the missing dimension.</p> 	204 cm	7.G.B.6

Pyramid Shape Worksheet | Grades 6 to 8 | Answers

Question number	Question	Answers	Standard
13	<p>Sylvia is painting the roof of bird houses. The paint costs \$0.18 per square foot. How much money will Sylvia spend to paint the roof of 100 bird houses?</p> 	$11 \text{ inches} = \frac{11}{12} \text{ ft}$ $19 \text{ inches} = \frac{19}{12} \text{ ft}$ $1 \text{ roof: } \frac{11}{12} \times \frac{19}{12} \times \frac{1}{2}$ $= \frac{209}{288} \text{ ft}^2$ $100 \times \frac{209}{288} \text{ ft}^2 = \frac{20,900}{288}$ $= 72.57 \text{ ft}^2$ <p><i>*rounded</i></p> $72.57 \text{ ft}^2 \times 0.18 =$ <p>\$13.06</p> <p><i>*rounded</i></p>	6.G.A.4 7.G.B.6
14	<p>The total surface area is 312m^2. Find the missing dimension.</p> 	17m	6.G.A.4 7.G.B.6




Question number	Question	Answers	Standard
15	 <p>State the volume formulas for each shape and explain them within the context of the shape.</p>	<p><i>Explanations will vary.</i></p> <p>Example answer: The volume of a cube is the area of the base times the height, because the 3D cube can be thought of as the base shape over and over again. The square pyramid also has a base of a cube, but it gets smaller each time, so its volume is less. The missing parts from the cube to the pyramid could be combined to make 2 additional pyramids, so that makes the volume of the pyramid $\frac{1}{3}$ of the cube.</p>	7.G.B.6

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