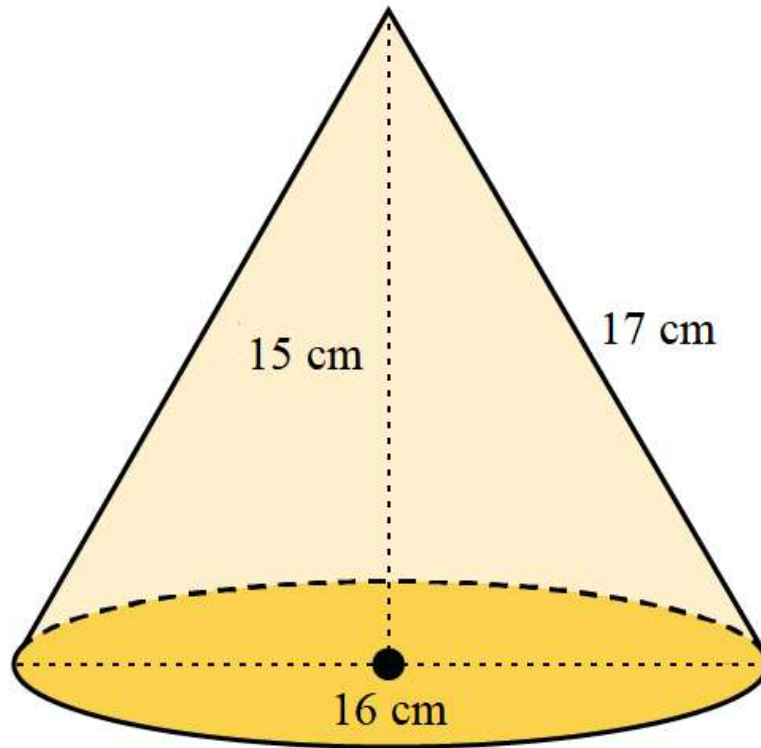


Question 1

A)

Use the image to answer the question.



What is the height of the right circular cone?

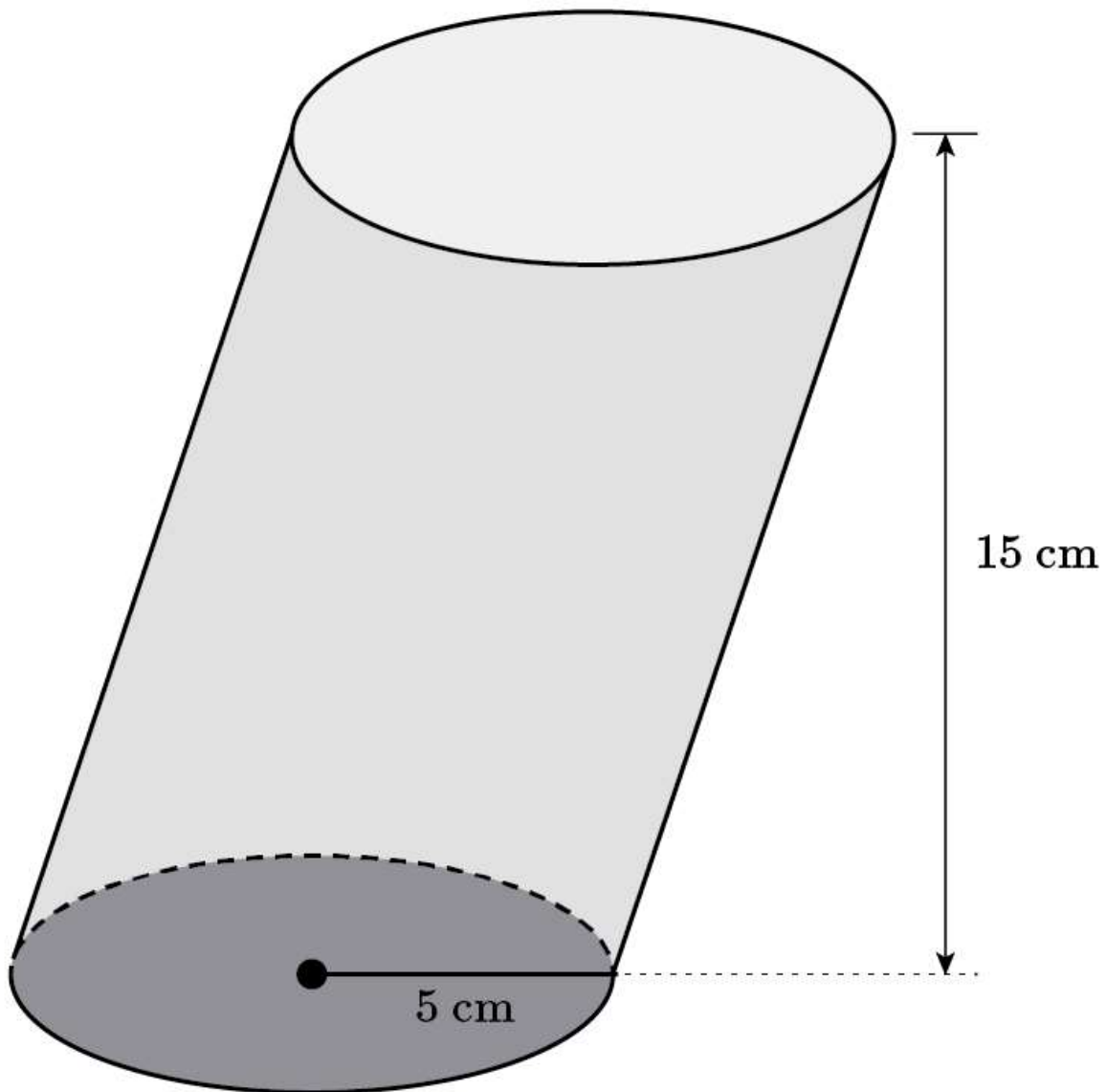
(1 point)

- 16 cm
- 8 cm
- 15 cm
- 17 cm

Question 2

A)

Use the image to answer the question.



Find the surface area of the cylinder below. Use the approximation 3.14 for pi.

(1 point)

- 628 centimeters
- 628 square centimeters
- 533.8 square centimeters
- 1,099 square centimeters

Question 3

A) Adrian is painting the outside of a cylinder that he plans to use as a coffee table. The cylinder has a radius of 4 feet and a height of 3 feet. Adrian wants to paint all around the outside of the cylinder, including the top and bottom faces. In order to understand how much paint is needed, he wants to know the surface area of the outside of the cylinder. What is the surface area of the cylinder, measured in square feet? Use 3.14 for pi and round your answer to the nearest tenth. (1 point)

ft^2

Question 4

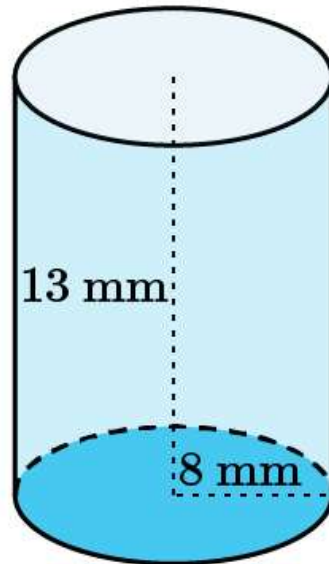
A) Eli is making a model castle out of clay. One of the roof peaks is in the shape of a cone with a diameter of 14 inches and a slant height of 20 inches. What is the surface area of the cone peak? Round your answer to the nearest hundredth. Use 3.14 for pi. (1 point)

square inches

Question 5

A)

Use the image to answer the question.



Find the volume of the cylinder, in cubic millimeters. Round your answer to the nearest hundredth.

(1 point)

cubic millimeters

Question 6

A) A water bottle has a height of 16 inches and a radius of 4 inches. What is the volume, in cubic inches, of the water bottle? Use 3.14 for pi. (1 point)

cubic inches

Question 7

A) Find the volume, in cubic inches, of a cone with a radius of 13 inches and a height of 27 inches. Round your answer to the nearest hundredth. Use 3.14 for pi. (1 point)

cubic inches

Question 8

A) A cone-shaped container on a farm is used for storing animal feed. The container has a radius of 4 feet and a height of 12 feet. What volume of feed, in cubic feet, can the container store? Round your answer to the nearest hundredth. Use 3.14 for π . (1 point)

cubic feet

Question 9

A) The diameter of a sphere (1 point)

- does not pass through the center of the sphere.
- is the longest distance on a sphere.
- is the distance from the center of the sphere to any point on the surface of the sphere.
- is half the length of the radius.

Question 10

A) Find the surface area of a hemisphere with a radius 10m. Leave your answer in terms of pi. (1 point)

- $500\pi \text{ m}^2$
- $300\pi \text{ m}^2$
- $200\pi \text{ m}^2$
- $400\pi \text{ m}^2$

Question 11

A) The surface area of a sphere is $7.84\pi \text{ ft.}^2$. What is the radius of this sphere? (1 point)

ft.

Question 12

A) How much ice cream is in a spherical scoop of ice cream with a radius of 3 cm? Use 3.14 as an approximation for pi. Round your answer to the nearest whole number. (1 point)

cm^3

Question 13

A) Suppose a sphere, cylinder, and cone all share the same radius and the cylinder and cone also share the same height, which is twice the radius. Which of the following is true about the relationship between the volume formulas for the sphere, cylinder, and cone? (1 point)

- sphere - cone = cylinder
- 3 cones = 1 cylinder
- sphere = cylinder + cone
- 1 cylinder = 2 cones + 1 sphere

Question 14

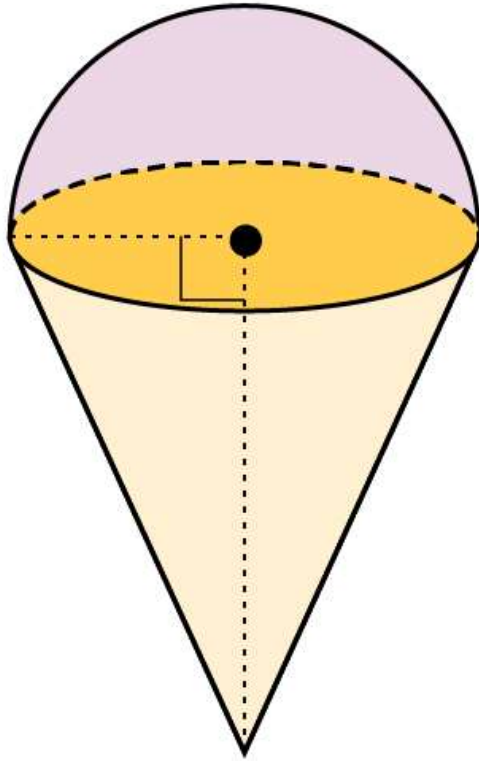
A) The volume of a sphere is 48 m^3 . What is the volume of a cylinder if its radius is the same as the sphere's and its height is equal to the sphere's diameter? (1 point)

m^3

Question 15

A)

Use the image to answer the question.



Aimee packs ice cream into an ice cream cone. She then puts a perfect hemisphere of ice cream on top of the cone that has a volume of 4 in.^3 . The diameter of the ice cream cone is equal to its height. What is the total volume of ice cream in and on top of the cone? Use the relationship between the formulas for the volumes of cones and spheres to help solve this problem. Show your work and explain your reasoning.

(4 points)

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Math Short Answer Rubric (4 points)

Points Awarded	Criteria
4	<p>The answer is clear and correct.</p> <p>The answer shows that the student used problem-solving skills and reasoning.</p> <p>All work is shown or explained.</p>
3	<p>The answer is mostly correct. The student made small errors while solving.</p> <p>The answer shows that the student used some problem-solving skills and reasoning.</p> <p>Most work is shown or explained.</p>
2	<p>The answer is partially correct. The student made errors while solving.</p> <p>The answer shows that the student used some problem-solving skills or reasoning.</p> <p>Some work is shown or explained.</p>
1	<p>The answer is incorrect. The student made errors while solving.</p> <p>The answer shows little problem-solving skills or reasoning.</p> <p>Little or no work is shown.</p>
0	<p>The question is not answered.</p>