04 - Lessons 4 & 5, Exam 4

Part 1 of 2 - **0.0/ 49.999508 Points**

Question 1 of 30

0.0/ 3.3333 Points

You cut square corners with side lengths that are whole numbers from a piece of cardboard with dimensions 20 inches by 30 inches. You then fold the cardboard to create a box with no lid. Which of the following dimensions will give you the greatest volume?

A. 12 in. by 22 in. by 4 in.

B. 10 in. by 20 in. by 5 in.

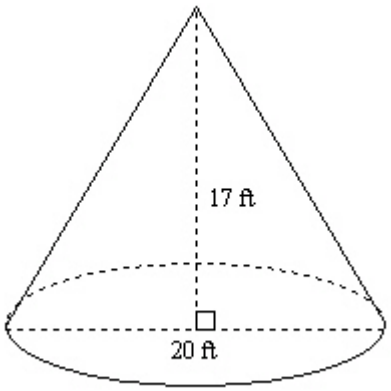
C. 14 in. by 24 in. by 2 in.

D. 10 in. by 24 in. by 6 in.

Question 2 of 30

0.0/ 3.3333 Points

The diagram shows the dimensions of a teepee. Find the volume of the building to the nearest cubic unit. Use 3.14 for pi.



A. 1,780 ft^3

B. 1,382 ft^3

C. 21,363 ft^3

D. 5,341 ft^3

Question 3 of 30

0.0/ 3.3333 Points

Find the volume of a can of soup that has a height of 16 cm and a radius of 5 cm. Use 3.14 for pi.

A. 1,256.0 cm^3

B. 251.2 cm^3

C. 4,019.2 cm^3

D. 502.4 cm^3

Question 4 of 30

0.0/ 3.3333 Points

Find the surface area of a rectangular prism that is 16 inches long, 12 inches wide, and 5 inches high.

A. 960 $in.^2$

B. 689 $in.^2$

C. 714 $in.^2$

D. 664 $in.^2$

Question 5 of 30

0.0/ 3.3333 Points

The length of a rectangular room is 7.9 m and its width is 8.6 m. Find the area of the room.

A. 73.96 m^2

B. 62.41 m^2

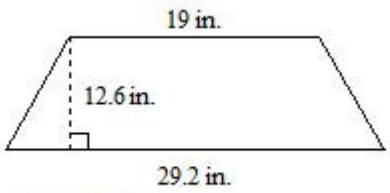
C. 67.94 m^2

D. 33 m^2

Question 6 of 30

0.0/ 3.3333 Points

Find the area



Not drawn to scale

A.

607.32 $in.^2$

B.

36.7 $in.^2$

C.

303.66 $in.^2$

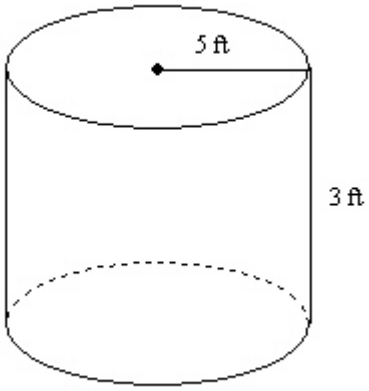
D.

77.2 in.^2

Question 7 of 30

0.0/ 3.3333 Points

Find the volume of the cylinder to the nearest cubic foot. Use a calculator.



A. 236 ft^3

B. 942 ft^3

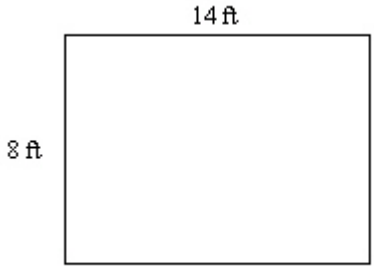
C. 75 ft^3

D. 251 ft^3

Question 8 of 30

0.0/ 3.3333 Points

Find the area of the rectangle.



A. 44 ft^2

B. 64 ft^2

C. 196 ft^2

D. 112 ft^2

Question 9 of 30

0.0/ 3.3333 Points

Find the area of a triangle with a base of 8 m and a height of 6 m.

A. $7\,m^2$

B. $48\,m^2$

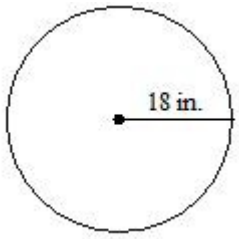
C. $24\,m^2$

D. $14\,m^2$

Question 10 of 30

0.0/ 3.3333 Points

Find the area



A.

54π in

B.

36π in.

C.

18π in.

D.

324π in.

Question 11 of 30

0.0/ 3.3333 Points

Find the area of the trapezoid.

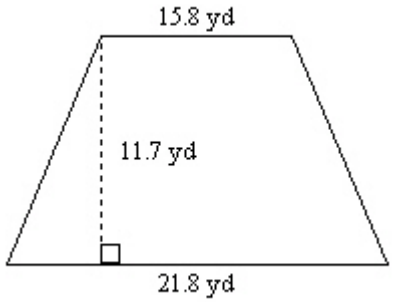


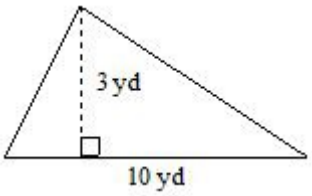
Diagram not to scale.

- A. 92.43 yd^2
- B. 219.96 yd^2
- C. 127.53 yd^2
- D. 439.92 yd^2

Question 12 of 30

0.0/ 3.3333 Points

Find the area



- A.

  30 yd^2

- B.

  6.5 yd^2

- C.

  13 yd^2

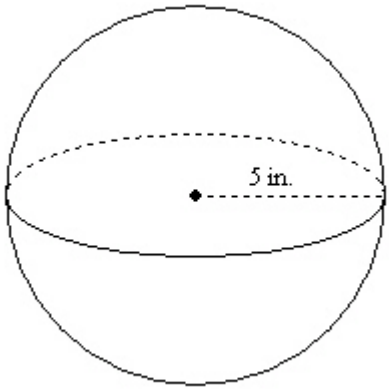
- D.

  15 yd^2

Question 13 of 30

0.0/ 3.3333 Points

Find the volume of the sphere to the nearest whole number. Use pi = 3.14.



A. 131 in.^{3}

B. 393 in.^{3}

C. 4,187 in.^{3}

D. 523 in.^{3}

Question 14 of 30

0.0/ 3.3333 Points

Renata is completing a craft project that involves covering only the lateral surface of a cylindrical container with fabric. The cylinder has a height of 12.8 in. and a radius of 15.1 in. To the nearest square unit, how much fabric does she need for this project? Use a calculator.

A. 1,214 in.^{2}

B. 2,040 in.^{2}

C. 2,647 in.^{2}

D. 1,931 in.^{2}

Question 15 of 30

0.0/ 3.3333 Points

Write the most precise name for the space figure with the given properties. a lateral surface and two circular bases

A. prism

B. sphere

C. cone

D. cylinder

Question 16 of 30

0.0/ 3.3333 Points

Use a calculator to find the given value. Round to four decimal places.

sin 21°

A. 0.3584

B. 2.7904

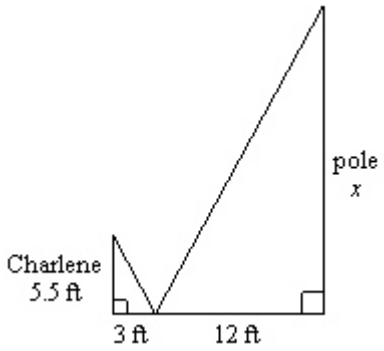
C. 0.9336

D. 0.3839

Question 17 of 30

0.0/ 3.3333 Points

Charlene made the sketch below in order to find the height x of a pole. She positioned a mirror on the ground so that she could see the reflection of the top of the pole. Her height, her distance from the mirror, and her line of sight to the mirror determine the smaller triangle. The pole's height, its distance from the mirror, and the distance from the top of the pole to the mirror form a larger similar triangle. Find the height of the pole to the nearest tenth.



A. 16.5 ft

B. 22.0 ft

C. 20.5 ft

D. 17.5 ft

Question 18 of 30

0.0/ 3.3333 Points

Max is in a control tower at a small airport. He is located 50 feet above the ground when he spots a small plane on the runway at an angle of depression of °. What is the distance of the plane from the base of the tower? Round to the nearest foot.

A. 25 feet

B. 110 feet

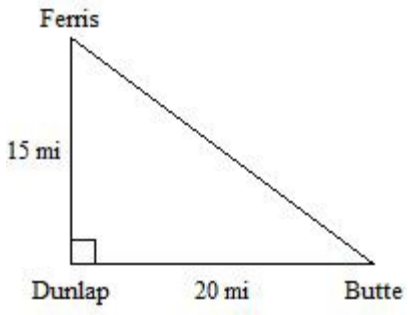
C. 56 feet

D. 98 feet

Question 19 of 30

0.0/ 3.3333 Points

Wayne used the diagram to compute the distance from Ferris, to Dunlap, to Butte. How much shorter is the distance directly from Ferris to Butte than the distance Wayne found?

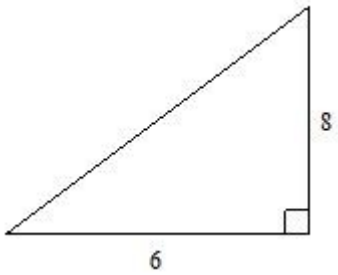


- A. 20 mi
- B. 25 mi
- C. 10 mi
- D. 35 mi

Question 20 of 30

0.0/ 3.3333 Points

Find the missing side length



- A. 10
- B. 48
- C. 28
- D. 100

Question 21 of 30

0.0/ 3.3333 Points

The legs of an isosceles right triangle are 11 cm long. Find the length of the hypotenuse. Round to the nearest tenth if necessary.

- A. 15.6 cm
- B. 22 cm

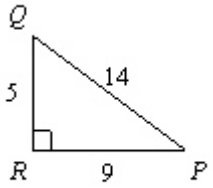
C. 7.8 cm

D. 19.1 cm

Question 22 of 30

0.0/ 3.3333 Points

For ΔQPS, find the sine, cosine, and tangent of $\angle P$.



Not drawn to scale

A. sin P = $\frac{9}{14}$, cos P = $\frac{5}{14}$, tan P = $\frac{5}{9}$

B. sin P = $\frac{5}{14}$, cos P = $\frac{9}{14}$, tan P = $\frac{9}{5}$

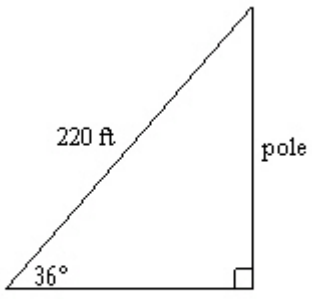
C. sin P = $\frac{5}{14}$, cos P = $\frac{9}{14}$, tan P = $\frac{5}{9}$

D. sin P = $\frac{14}{5}$, cos P = $\frac{14}{9}$, tan P = $\frac{5}{9}$

Question 23 of 30

0.0/ 3.3333 Points

Wires are attached to a pole to make it more secure. The diagram shows one of those wires having a length of 220 feet. The angle of elevation from the ground to the top of the pole is $^{\circ}$. What is the height of the pole?



Not drawn to scale

A. 178.0 ft

B. 374.3 ft

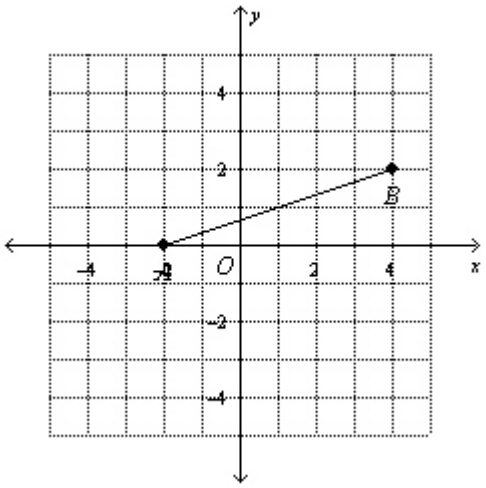
C. 159.8 ft

D. 129.3 ft

Question 24 of 30

0.0/ 3.3333 Points

Find the midpoint of $\overline{AB}$.



A. (3, 1)

B. (1, 1)

C. (10, 4)

D. (4, 4)

Question 25 of 30

0.0/ 3.3333 Points

Use a calculator to find the given value. Round to four decimal places.

tan 27°

A. 0.8910

B. 1.9626

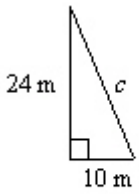
C. 0.4540

D. 0.5095

Question 26 of 30

0.0/ 3.3333 Points

In the given right triangle, find the missing length.



Not drawn to scale

- A. 28 m
- B. 26 m
- C. 25 m
- D. 27 m

Question 27 of 30

0.0/ 3.3333 Points

The lengths of two sides of a right triangle are given. Find the length of the third side. Round to the nearest tenth if necessary. legs: 28 in. and 15 in.

- A. 37.5 in.
- B. 23.6 in.
- C. 29.6 in.
- D. 31.8 in.

Question 28 of 30

0.0/ 3.3333 Points

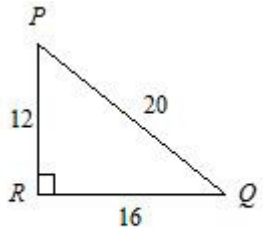
The surface area of the top surface of the water in a circular swimming pool is about 206 square feet. Estimate the radius of the pool, to the nearest foot.

- A. about 14 feet
- B. about 8 feet
- C. about 11 feet
- D. about 10 feet

Question 29 of 30

0.0/ 3.3333 Points

Write the tangent ratios for $\angle P$ and $\angle Q$.



Not drawn to scale

A.

$$\tan P = \frac{12}{16};\ \tan Q = \frac{16}{12}$$

B.

$$\tan P = \frac{20}{12};\ \tan Q = \frac{12}{20}$$

C.

$$\tan P = \frac{16}{12};\ \tan Q = \frac{12}{16}$$

D.

$$\tan P = \frac{20}{16};\ \tan Q = \frac{16}{20}$$

0.0/ 3.3333 Points

Question 30 of 30

Find the distance between the two points. Round to the nearest tenth if necessary.

(2, 5) and (–1, –5)

A. 1

B. 109

C. 10.4

D. 3

Switch to Full View