

#1

ID: 4b7bb316

The length of each edge of a box is 29 inches. Each side of the box is in the shape of a square. The box does not have a lid. What is the exterior surface area, in square inches, of this box without a lid?

#2

ID: f67e4efc

A right circular cylinder has a volume of 45π . If the height of the cylinder is 5, what is the radius of the cylinder?

- A) 3
- B) 4.5
- C) 9
- D) 40

#3

ID: 5afbdc8e

What is the length of one side of a square that has the same area as a circle with radius 2 ?

- A) 2
- B) $\sqrt{2\pi}$
- C) $2\sqrt{\pi}$
- D) 2π

#4

ID: 1f0b582e

Square X has a side length of 12 centimeters. The perimeter of square Y is 2 times the perimeter of square X. What is the length, in centimeters, of one side of square Y?

- A) 6
- B) 10
- C) 14
- D) 24

#5

ID: e86f0651

A circle has a radius of 43 meters. What is the area, in square meters, of the circle?

- A) $\frac{43\pi}{2}$
- B) 43π
- C) 86π
- D) $1,849\pi$

#6

ID: ec5d4823

What is the volume, in cubic centimeters, of a right rectangular prism that has a length of 4 centimeters, a width of 9 centimeters, and a height of 10 centimeters?

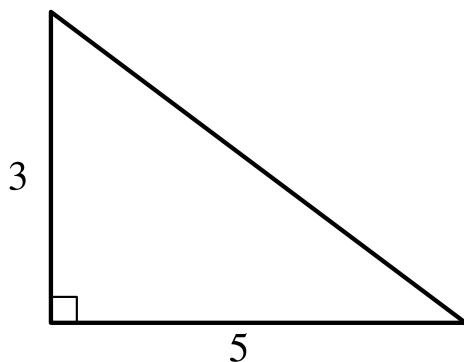
#7

ID: 3b931fb0

A right circular cylinder has a volume of 377 cubic centimeters. The area of the base of the cylinder is 13 square centimeters. What is the height, in centimeters, of the cylinder?

#8

ID: a4ed5285



Note: Figure not drawn to scale.

The figure shows the lengths, in inches, of two sides of a right triangle. What is the area of the triangle, in square inches?

#9

ID: e336a1d2

A cube has an edge length of 41 inches. What is the volume, in cubic inches, of the cube?

- A) 164
- B) 1,681
- C) 10,086
- D) 68,921

#10

ID: e4b4e9ea

The length of the edge of the base of a right square prism is 6 units. The volume of the prism is 2,880 cubic units. What is the height, in units, of the prism?

- A) $4\sqrt{30}$
- B) 36
- C) $24\sqrt{5}$
- D) 80

#11

ID: c0586eb5

A cylinder has a diameter of 8 inches and a height of 12 inches. What is the volume, in cubic inches, of the cylinder?

- A) 16π
- B) 96π
- C) 192π
- D) 768π

#12

ID: 151eda3c

A manufacturing company produces two sizes of cylindrical containers that each have a height of 50 centimeters. The radius of container A is 16 centimeters, and the radius of container B is 25% longer than the radius of container A. What is the volume, in cubic centimeters, of container B?

- A) $16,000\pi$
- B) $20,000\pi$
- C) $25,000\pi$
- D) $31,250\pi$

#13

ID: d621cffb

A sphere has a radius of $\frac{17}{5}$ feet. What is the volume, in cubic feet, of the sphere?

- A) $\frac{5\pi}{17}$
- B) $\frac{68\pi}{15}$
- C) $\frac{32\pi}{5}$
- D) $\frac{19,652\pi}{375}$

#14

ID: e0874bc2

The table gives the perimeters of similar triangles TUV and XYZ , where TU corresponds to XY . The length of TU is 18.

	Perimeter
Triangle TUV	37
Triangle XYZ	333

What is the length of XY ?

- A) 2
- B) 18
- C) 55
- D) 162

#15

ID: 38517165

A circle has a circumference of 31π centimeters. What is the diameter, in centimeters, of the circle?

#16

ID: 98c12e38

Circle K has a radius of 4 millimeters (mm). Circle L has an area of $100\pi \text{ mm}^2$. What is the total area, in mm^2 , of circles K and L ?

- A) 14π
- B) 28π
- C) 56π
- D) 116π

#19

ID: ae33e0a1

A right circular cylinder has a base diameter of 22 centimeters and a height of 6 centimeters. What is the volume, in cubic centimeters, of the cylinder?

- A) 132π
- B) 264π
- C) 726π
- D) $2,904\pi$

#17

ID: 6ae1360d

A circle has a radius of 2.1 inches. The area of the circle is $b\pi$ square inches, where b is a constant. What is the value of b ?

#20

ID: cecbdeba

A right circular cylinder has a volume of 432 cubic centimeters. The area of the base of the cylinder is 24 square centimeters. What is the height, in centimeters, of the cylinder?

- A) 18
- B) 24
- C) 216
- D) 10,368

#18

ID: 08b7a3f5

A triangular prism has a height of 8 centimeters (cm) and a volume of 216 cm^3 . What is the area, in cm^2 , of the base of the prism? (The volume of a triangular prism is equal to Bh , where B is the area of the base and h is the height of the prism.)

#21

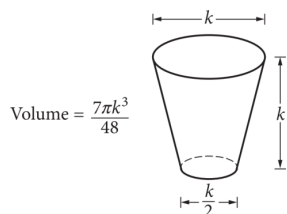
ID: a2e76b60

A cylindrical can containing pieces of fruit is filled to the top with syrup before being sealed. The base of the can has an area of 75 cm^2 , and the height of the can is 10 cm. If 110 cm^3 of syrup is needed to fill the can to the top, which of the following is closest to the total volume of the pieces of fruit in the can?

- A) 7.5 cm^3
- B) 185 cm^3
- C) 640 cm^3
- D) 750 cm^3

#22

ID: 37dde49f

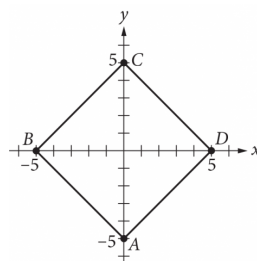


The glass pictured above can hold a maximum volume of 473 cubic centimeters, which is approximately 16 fluid ounces. What is the value of k , in centimeters?

- A) 2.52
- B) 7.67
- C) 7.79
- D) 10.11

#23

ID: cf53cb56



In the xy -plane shown, square ABCD has its diagonals on the x - and y -axes. What is the area, in square units, of the square?

- A) 20
- B) 25
- C) 50
- D) 100