Name _____ Date _____

* Review for Volume Quiz *

1) Find the radius of a circle with a diameter of 5 feet.

A) 10 ft
C) 7.5 ft
B) 15.7 ft
D) 2.5 ft

2) Find the circumference of a circle with a diameter of 8 feet. Use 3.14 for π.

A) 25.12 ft
C) 27.21 ft
B) 12.56 ft
D) 18.84 ft

3) The radius of a circle is 7. What is the area of the circle in terms of π?

4) What is the area of a circle whose diameter is 8? (Use $\pi = 3.14$)

A) 198.86
C) 50.24
B) 200.96
D) 25.12

5) Express, in terms of π, the circumference of a circle whose diameter is 14.

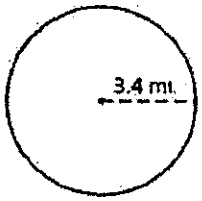
6) Find the circumference of a circle with a radius of 12 cm. Use 3.14 for π.

A) 57.36 cm
C) 73.68 cm
B) 75.36 cm
D) 37.68 cm

7) Find the diameter of a circle with a radius of 9 centimeters.

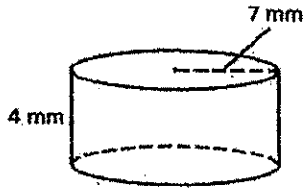
A) 27 cm
C) 4.5 cm
B) 18 cm
D) 28.26 cm

8) Find the area of the circle to the nearest tenth. Use 3.14 for π.

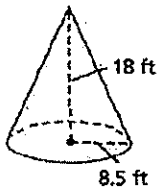


A. 114 m^2
C. 145.2 m^2
B. 36.3 m^2
D. 21.4 m^2

9) Find the volume of the cylinder. Round your answer to the nearest tenth.



10) Find the volume of the figure. Use 3.14 for π. If necessary, round your answer to the nearest tenth.



A. 160.1 ft^3
C. 75.6 ft^3
B 1361.2 ft^3
D. 4083.6 ft^3

11) A county has constructed a conical building to store sand. The cone has a height of 195 ft and a diameter of 307 ft. Find the volume of this building to the nearest hundredth.

12) To the nearest tenth, find the volume of a sphere with a diameter of 10 cm. Use 3.14 for π.

A. 314.2 cm^3
C. 1256.6 cm^3
B. 523.3 cm^3
D. 4188.8 cm^3

13) Find the volume of a sphere with a radius of 6 cm to the nearest tenth. Use 3.14 for π.

F. 37.7 cm^3
H. 904.3 cm^3
G. 452.2 cm^3
J. 226.1 cm^3

14) A cylinder is 5 centimeters tall and has a radius of 2.1 centimeters. Find the volume to the nearest tenth. Use 3.14 for π.

A. 33.0 cm^3 **C.** 65.9 cm^3

B. 61.2 cm^3 **D.** 69.2 cm^3

15) The diameter of the base of a cylinder is 10 cm and the height is 20 cm. What is the volume of the cylinder? Use 3.14 for π.

F. 628 cm^3 **H.** 1,570 cm^3

G. 1,256 cm^3 **J.** 6,280 cm^3

16) Find the area of a circle with diameter 31.6 cm, Use 3.14 for π

17) The diameter of an ice-hockey puck is 3.0 inches. To the nearest tenth, what is the area of the flat upper surface? Use 3.14 for π.

F. 3.5 in^2 **H.** 7.1 in^2

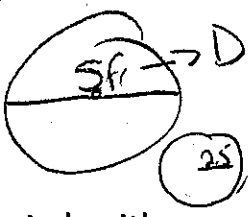
G. 9.4 in^2 **J.** 28.3 in^2

1) Find the radius of a circle with a diameter of 5 feet.

A) 10 ft C) 7.5 ft
B) 15.7 ft D) 2.5 ft

$r = \frac{D}{2}$

$r = \frac{5}{2} = r = 2.5$ ft



2) Find the circumference of a circle with a diameter of 8 feet. Use 3.14 for π.

A) 25.12 ft C) 27.21 ft
B) 12.56 ft D) 18.84 ft

$C = \pi D$
$C = (3.14)(8)$
$C = 25.12$ ft

3) The radius of a circle is 7. What is the area of the circle in terms of π?

Symbol $A = \pi r^2$
$A = \pi \cdot (7)^2$
$A = \pi \cdot 49$
$A = 49\pi$

Do not multiply by π

4) What is the area of a circle whose diameter is 8? (Use π = 3.14)

A) 198.86 C) 50.24
B) 200.96 D) 25.12

$r = \frac{D}{2}$
$r = \frac{8}{2}$
$r = 4$

$A = \pi r^2$
$A = (3.14) \cdot (4)^2$
$A = (3.14)(16)$
$A = 50.24$

5) Express, in terms of π, the circumference of a circle whose diameter is 14.

Don't multiply by π

$C = \pi D$
$C = \pi \cdot 14$
$C = 14\pi$

6) Find the circumference of a circle with a radius of 12 cm. Use 3.14 for π.

A) 57.36 cm C) 73.68 cm
B) 75.36 cm D) 37.68 cm

$D = 2r$
$D = 2(12)$
$D = 24$

$C = \pi D$
$C = (3.14)(24)$
$C = 75.36$

7) Find the diameter of a circle with a radius of 9 centimeters.

A) 27 cm C) 4.5 cm
B) 18 cm D) 28.26 cm

$9 \cdot 2 = 18$

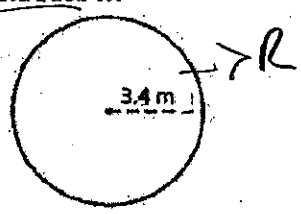
$D = 2r$
$D = 2(9)$
$D = 18$

multiply the radius by 2 to get the diameter

Don't forget say what to use for π

307

8) Find the area of the circle to the nearest tenth. Use 3.14 for π.



A. 114 m² C. 145.2 m²

B. 36.3 m² D. 21.4 m²

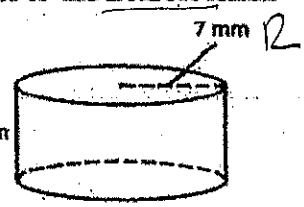
$A = \pi r^2$

$A = (3.14)(3.4)^2$

$A = (3.14)(11.56)$

$A = 36.2984$

9) Find the volume of the cylinder. Round your answer to the nearest tenth.



* use the π - button if they don't say what to use for π

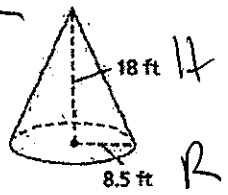
$V = \pi r^2 h$

$V = \pi \cdot (7)^2 (4)$

$V = \pi \cdot 49.4$

$V = 615.8 mm^3$

10) Find the volume of the figure. Use 3.14 for π. If necessary, round your answer to the nearest tenth.



A. 160.1 ft³ C. 75.6 ft³

B 1361.2 ft³ D. 4083.6 ft³

$V = \frac{1}{3} \pi r^2 h$

$V = \frac{1}{3} \cdot (3.14)(8.5)^2 (18)$

$V = \frac{1}{3} (3.14)(72.25)(18)$

$V = 1361.2 ft^3$

11) A county has constructed a conical building to store sand. The cone has a height of 195 ft and a diameter of 307 ft. Find the volume of this building to the nearest hundredth.

153.5

$R = \frac{D}{2}$

$R = \frac{307}{2}$

$R = 153.5$

$V = \frac{1}{3} \pi r^2 h$

$V = \frac{1}{3} \cdot \pi \cdot (153.5)^2 (195)$

$V = \frac{1}{3} \cdot \pi \cdot (23562.25)(195)$

$V = 4811494.45 ft^3$

12) To the nearest tenth, find the volume of a sphere with a diameter of 10 cm. Use 3.14 for π.

10

5

A. 314.2 cm³ C. 1256.6 cm³

B. 523.3 cm³ D. 4188.8 cm³ (calc.)

$V = \frac{4}{3} \pi r^3$ 5 ∧ 3

$V = \frac{4}{3} (3.14) (5)^3$

$V = \frac{4}{3} (3.14)(125)$

$V = 523.3 cm^3$

$R = \frac{D}{2}$

$R = \frac{10}{2}$

$R = 5$

13) Find the volume of a sphere with a radius of 6 cm to the nearest tenth. Use 3.14 for π.

F. 37.7 cm³ H. 904.3 cm³

G. 452.2 cm³ J. 226.1 cm³

$V = \frac{4}{3} \pi r^3$

$V = \frac{4}{3} (3.14) (6)^3$

$V = \frac{4}{3} (3.14)(216)$

$V = 904.3$

$R = \frac{D}{2}$

14) A cylinder is 5 centimeters tall and has a radius of 2.1 centimeters. Find the volume to the nearest tenth. Use 3.14 for π.

A. 33.0 cm^3 C. 65.9 cm^3

B. 61.2 cm^3 D. 69.2 cm^3

$V = \pi r^2 h$

$V = (3.14)(2.1)^2(5)$

$V = (3.14)(4.41)(5)$

$V = 69.2\ cm^3$

16) Find the area of a circle with diameter 31.6 cm, Use 3.14 for π

$A = \pi r^2$ $R = \frac{31.6}{2}$

$A = (3.14)(15.8)^2$ $R = 15.8$

31.6

$A = (3.14)(249.64)$

$A = 783.8696\ cm^2$

15) The diameter of the base of a cylinder is 10 cm and the height is 20 cm. What is the volume of the cylinder? Use 3.14 for π.

10

5

F. 628 cm^3 H. 1,570 cm^3

G. 1,256 cm^3 J. 6,280 cm^3

$\frac{10}{2} = 5$

$R = \frac{D}{2}$

$R = \frac{10}{2}$

$R = 5$

$V = \pi r^2 h$

$V = (3.14)(5)^2(20)$

$V = (3.14)(25)(20)$

$V = 1570\ cm^3$

17) The diameter of an ice-hockey puck is 3.0 inches. To the nearest tenth, what is the area of the flat upper surface? Use 3.14 for π. Area of a circle

F. 3.5 in^2 H. 7.1 in^2

G. 9.4 in^2 J. 28.3 in^2

3

1.5

$R = \frac{D}{2}$

$R = \frac{3}{2}$

$R = 1.5$

$A = \pi r^2$

$A = (3.14)(1.5)^2$

$A = (3.14)(2.25)$

$A = 7.1$

Extra (1) Circumference: the Distance arand the circle

(2) Diameter: a segment that passes through the center whose enpoints are on the circle

(3) Volume of a rectangular prism

$V = l \times w \times h$

(4) Volume of a cube

$V = s^3$