

$$AL = \frac{2\pi r \theta}{360} = \frac{2\pi(12)(145)}{360} = \frac{29\pi}{3} \text{ cm}$$

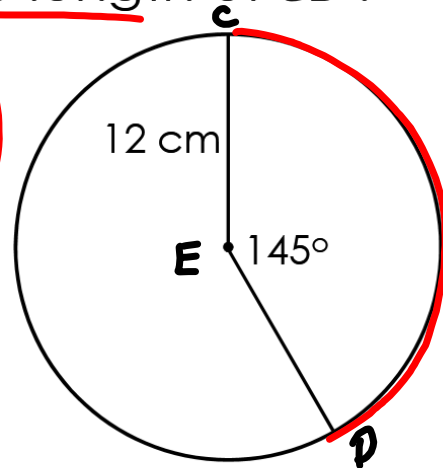
Circle with center E is shown. The measure of $\angle CED = 145^\circ$ and the length of CE is 12 cm. What is the length of \widehat{CD} ?

A. $\frac{29\pi}{72} \text{ cm}$

B. $\frac{29\pi}{3} \text{ cm}$

C. $\frac{29\pi}{6} \text{ cm}$

D. $\frac{29\pi}{2} \text{ cm}$



Volume of Prisms

$$V = Bh$$

B = area of BASE

(use different equations according to the shape of the base)

h = HEIGHT of the solid

(distance from Base to Base)

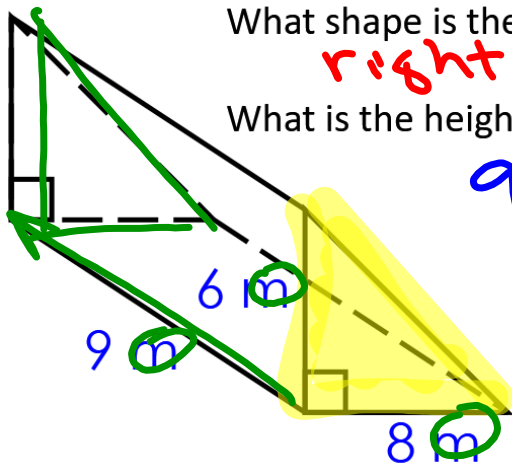
EX 1: Find the volume.

$$V = Bh$$

What shape is the base?

right triangle

What is the height?

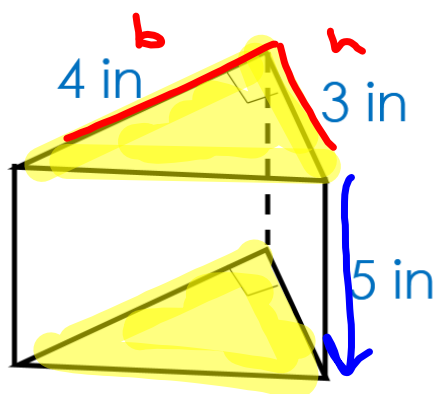
9 m

$$\frac{1}{2}bh$$
$$\frac{1}{2}(8)(6)(9)$$

$$V = 216 \text{ m}^3$$

EX 2: Find the volume.

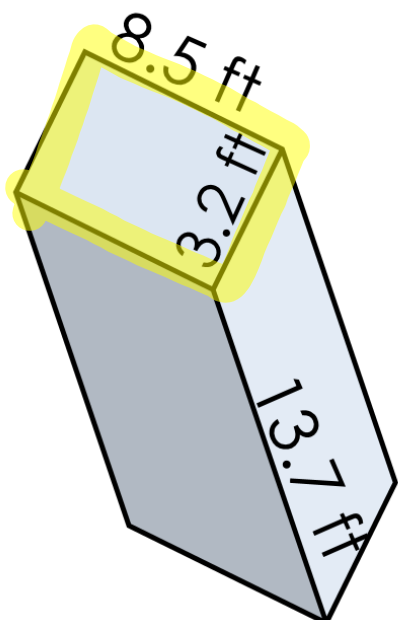
$$V = Bh$$



$$= \frac{1}{2}bh$$
$$= \frac{1}{2}(4)(3)(5)$$

$$V = 30 \text{ in}^3$$

EX 3: Find the volume.



$$V = Bh$$

$b \cdot h$
 $(8.5)(3.2)(13.7)$

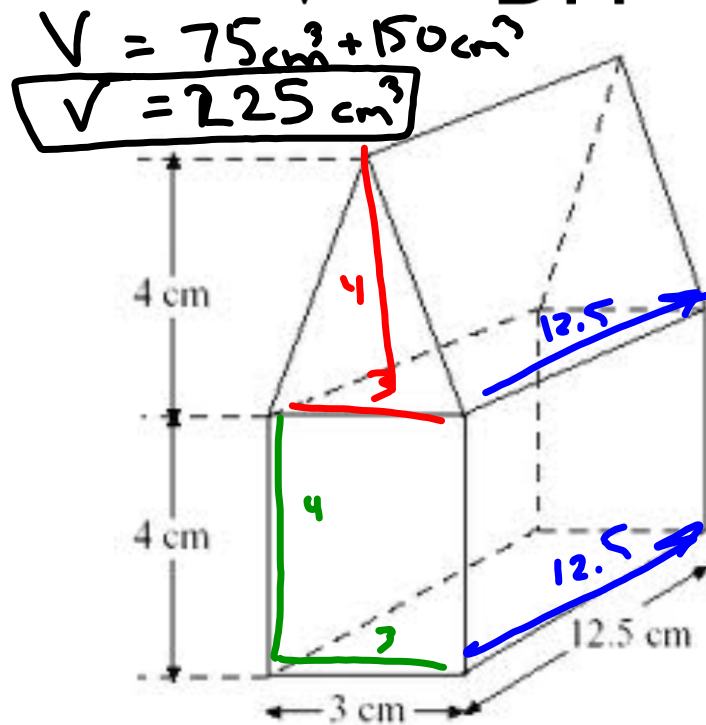
$$V = 372.64 \text{ ft}^3$$

EX 4: Find the volume.

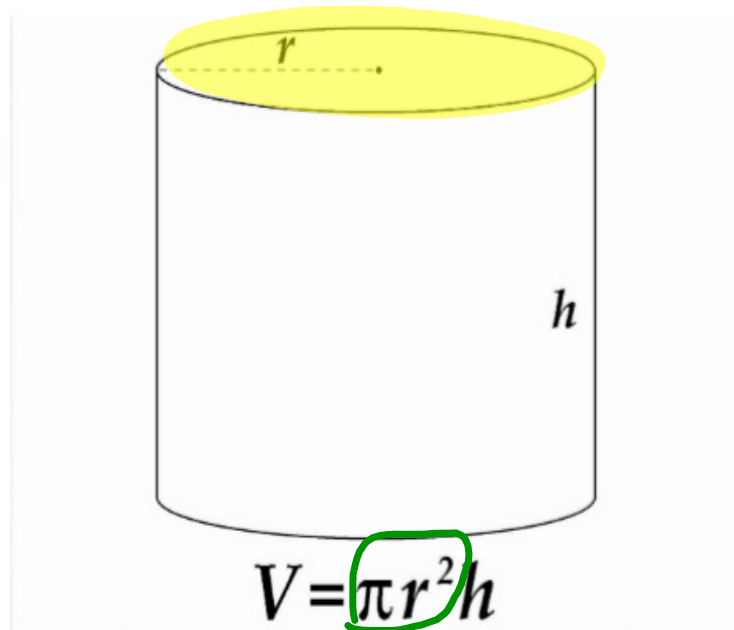
$$V = Bh$$

$$\begin{aligned}
 V_{\Delta} &= Bh \\
 &= \frac{1}{2}bh \quad \downarrow \\
 &= \frac{1}{2}(3)(4)(12.5) \\
 &= 75 \text{ cm}^3
 \end{aligned}$$

$$\begin{aligned}
 V_{\square} &= Bh \\
 &= bh \quad \downarrow \\
 &= (3)(4)(12.5) \\
 &= 150 \text{ cm}^3
 \end{aligned}$$



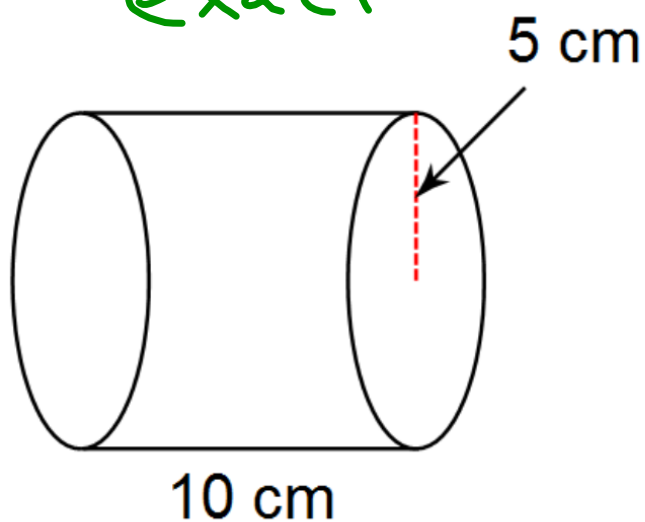
Volume of Cylinders



EX 5: Volume of a Cylinder

(leave in terms of pi)

exact

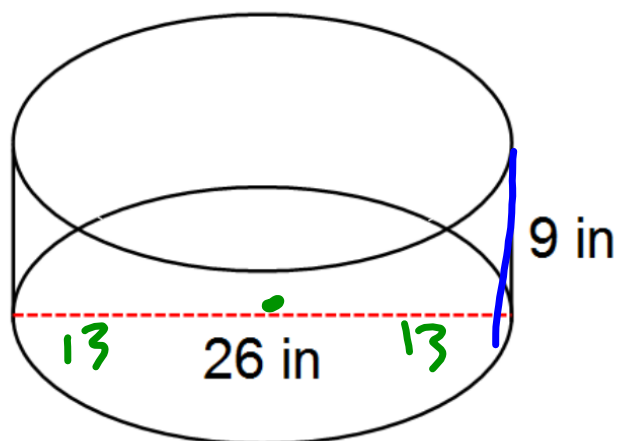


$$V = \pi r^2 h$$
$$\pi (5)^2 (10)$$
$$= 250\pi$$

cm³

EX6: Volume of a Cylinder

(round to the nearest tenths)



$$V_{\text{C}} = \pi r^2 h$$
$$= \pi (13)^2 (9)$$

$$\approx 4778.4 \text{ in}^3$$

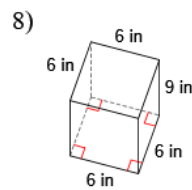
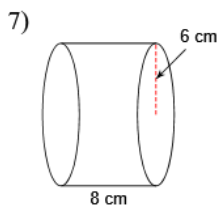
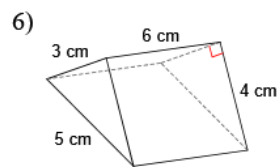
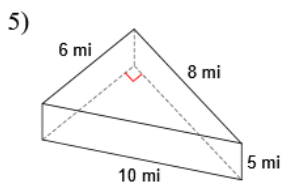
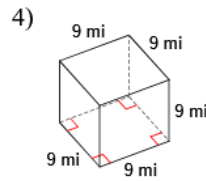
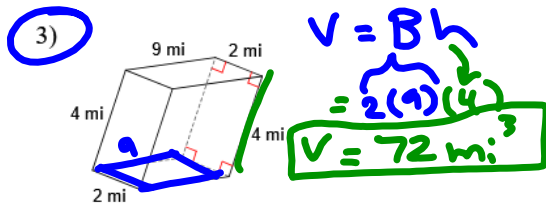
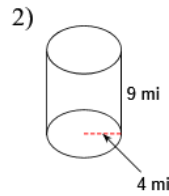
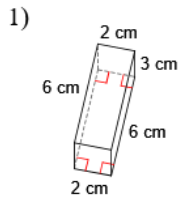
Geometry

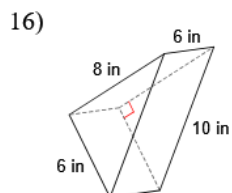
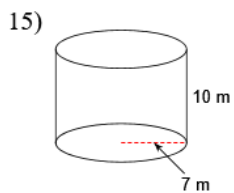
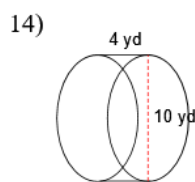
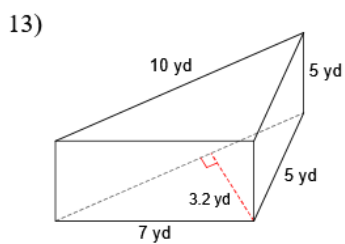
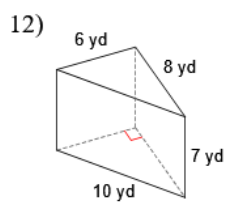
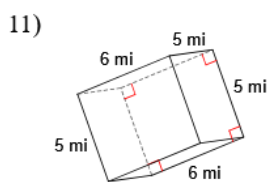
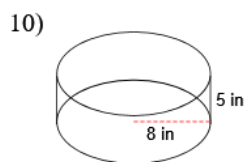
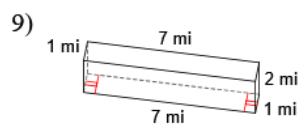
Name _____

Volume - Prisms and Cylinders

Date _____ Period _____

Find the volume of each figure. Round your answers to the nearest hundredth, if necessary.





Answers to Volume - Prisms and Cylinders

- | | | | |
|-----------------------|----------------------------|---------------------------|------------------------|
| 1) 36 cm^3 | 2) 452.39 mi^3 | 3) 72 mi^3 | 4) 729 mi^3 |
| 5) 120 mi^3 | 6) 36 cm^3 | 7) 904.78 cm^3 | 8) 324 in^3 |
| 9) 14 mi^3 | 10) 1005.31 in^3 | 11) 150 mi^3 | 12) 168 yd^3 |
| 13) 80 yd^3 | 14) 314.16 yd^3 | 15) 1539.38 m^3 | 16) 144 in^3 |

