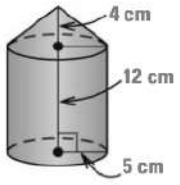
Find the Surface Area



Surface Area Cone

$S_{Cone} = \cancel{\pi r^2} + \pi r l$

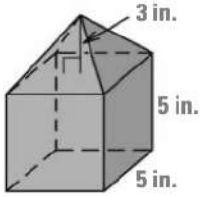
$l = 4^2 + 5^2$

$= 16 + 25$

$= \sqrt{41}$

$S_{cone} = 5(\pi)(\sqrt{41})$

$= 100.58$



$S_{Pyr} = \cancel{B} + \frac{1}{2} P l$

$P = 20$

$l = (3)^2 + (2.5)^2$

$= 9 + 6.25$

$= \sqrt{15.25}$

$S_{Pyr} = \frac{1}{2}(20)(\sqrt{15.25})$

$= 39.05$

$S_{cy} = \cancel{\pi} \pi r^2 + 2\pi r h$

$= \pi(5)^2 + 2\pi(5)(12)$

$= 25\pi + 120\pi$

$= 145\pi$

≈ 455.53

$S_{cube} = \cancel{B} + PH$

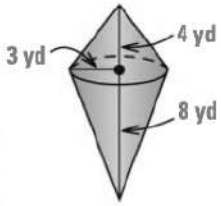
$= 5^2 + (20)(5)$

$25 + 100$

125

$S = 39.05 + 125$

164.05 in^2



$Cone_{top} = \cancel{\pi r^2} + \pi r l$

$= \pi(3)(5)$

$= 15\pi$

$Cone_{Botton} = \cancel{\pi r^2} + \pi r l$

$= \pi(3)(\sqrt{73})$

$S = 15\pi + 3\pi\sqrt{73}$

$= 127.65 \text{ yd}^2$

$S_{cone} + S_{cyl} = 100.58 + 455.53$

556.11 cm^2

Volumes of Pyramids and Cones

The volume of a pyramid is one-third the product of the area of the base and the height of the pyramid.

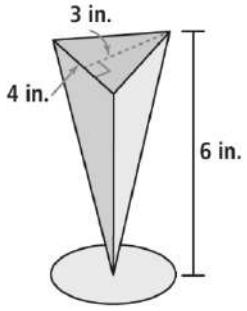
$V = \frac{1}{3}Bh$

The volume of a cone is one-third the product of the area of the base and the height of the cone.

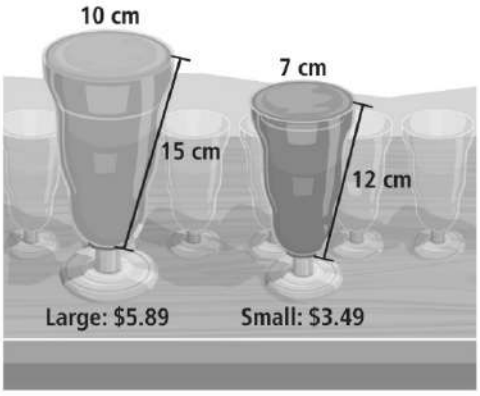
$V = \frac{1}{3}Bh$

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

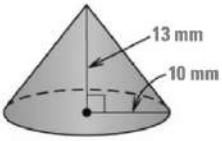
B. Jason is using the mold to make 12 candles. How many cubic inches of wax does he need?



A restaurant sells smoothies in two sizes. Which size is a better deal?



Find the volume



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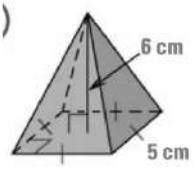
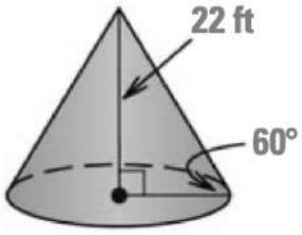
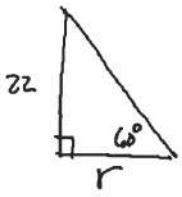


Find the volume





$\tan 60^\circ = \frac{22}{r}$

$r \tan 60^\circ = 22$

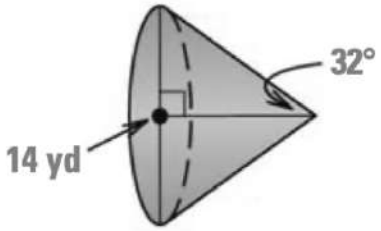
$r = \frac{22}{\tan 60^\circ}$

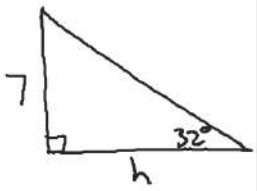
$= 12.70$

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

$\frac{1}{3}\pi (12.7)^2 (22)$

$= 3715.84 \text{ ft}^3$





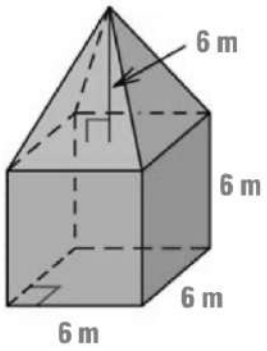
$\tan 32^\circ = \frac{7}{h}$

$h = \frac{7}{\tan 32}$

$V = \frac{1}{3}\pi (7)^2 \left(\frac{7}{\tan 32}\right)$

$= 574.82 \text{ yd}^3$

Find the volume



$V_{Pyr} = \frac{1}{3}BH$

$= \frac{1}{3}(6)^2(6)$

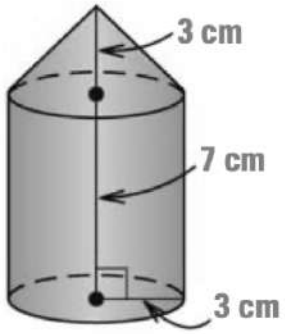
$= 72$

$V = BH$

$= (6)^2(6)$

$= 216$

$= 288\ m^3$



$V_{cone} = \frac{1}{3}BH$

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

$= \frac{1}{3}\pi(3)^2(3)$

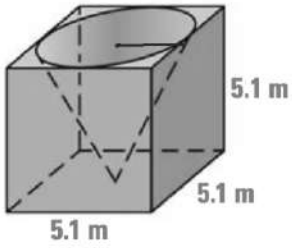
$= 9\pi$

$V_{cy} = \pi r^2 H$

$= \pi(3)^2(7)$

$= 63\pi$

$V = 72\pi\ cm^3$



$V_{Cube} = BH$

$= (5.1)^2(5.1)$

$= 132.65$

$V_{cone} = \frac{1}{3}\pi r^2 H$

$= \frac{1}{3}\pi(2.55)^2(5.1)$

$= 34.73$

$V = 132.65 - 34.73$

$97.92\ m^3$