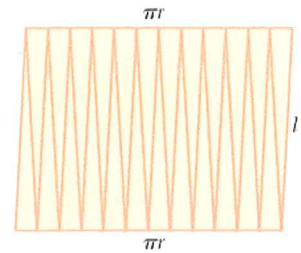
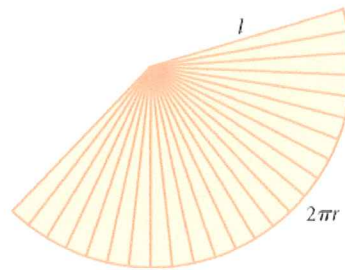
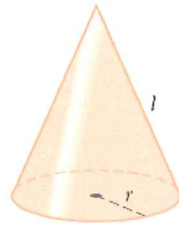
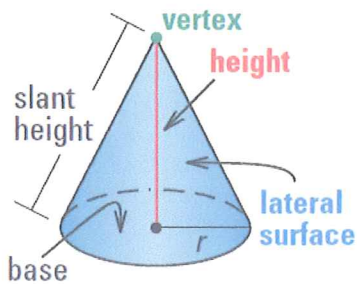


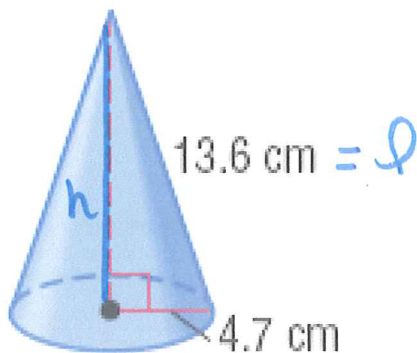
Basic Surface Area and Volume of CONES Notes



<u>Surface Area:</u> $SA = \pi r^2 + \pi r l$	<u>Lateral Area:</u> $LA = \pi r l$	<u>Volume:</u> $V = \frac{1}{3} BH$ B = AREA of BASE $B = \pi r^2$ H = Height connecting two bases.
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Find the volume and surface area of the solid. Round to the nearest tenth.

1.



SA = 270.2 cm²

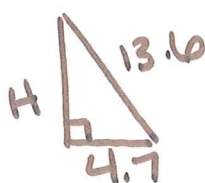
V = 296.1 cm³

$SA = \pi r^2 + \pi r l$
 $SA = \pi (4.7)^2 + \pi 4.7 \times 13.6$
 $SA = 270.2 \text{ cm}^2$

Find H

$H^2 + 4.7^2 = 13.6^2$

$H = 12.8 \text{ cm}$



$V = \frac{1}{3} B \cdot H$

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

$V = \frac{1}{3} \pi (4.7)^2 \times 12.8$

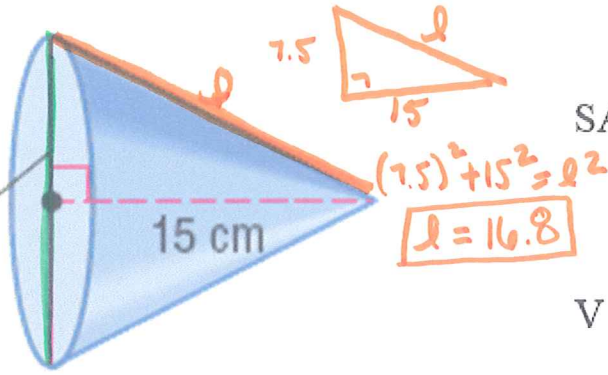
$V \approx 296.1 \text{ cm}^3$

2. $r = 15$ cm.

$SA = \pi r^2 + \pi r l$
must find l 1st!
 $SA = \pi(7.5)^2 + \pi(7.5)(16.8)$
 $SA = 572.6$

let this be the diameter

$d = 15$ cm



$SA = 572.6 \text{ cm}^2$

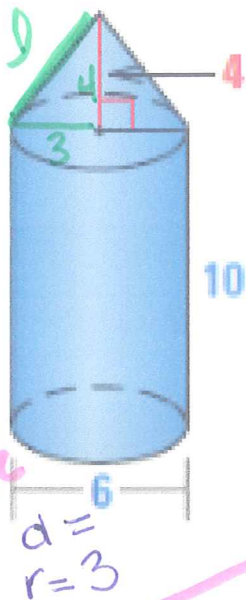
$V = 883.6 \text{ cm}^3$

$V = \frac{1}{3} \pi (7.5)^2 \times 15$

3. Find the volume of the composite solid.

Find l

$3^2 + 4^2 = l^2$
 $l = 5$



$V = \frac{1}{3} \pi r^2 \cdot H_{\text{cone}} + B \cdot H_{\text{cyl}}$

$V = \frac{1}{3} \pi 3^2 \times 4 + \pi 3^2 \cdot 10$

$V = 320.4 \text{ units}^3$

$SA = 2\pi r^2 + 2\pi r h + \pi r^2 + \pi r l$

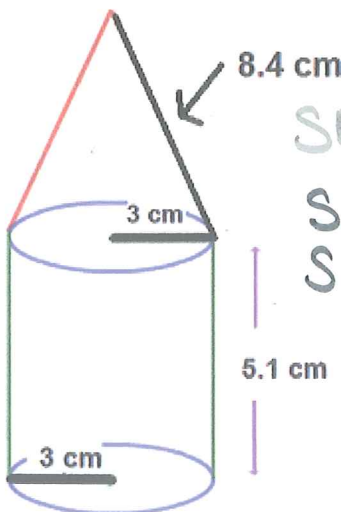
$SA = \pi 3^2 + 2\pi 3 \times 10 + \pi 3 \times 5$

$SA \approx 263.9 \text{ units}^2$

only one circle on surface

no circle showing from cone

4. Find the surface area of the composite solid.



Cone w/o base + cylinder w/ only one base showing

$SA = \cancel{\pi r^2} + \pi r l + \cancel{1} \pi r^2 + 2\pi r h$

$SA = \pi r l + \pi r^2 + 2\pi r h$

$SA = \pi 3 \cdot 8.4 + \pi 3^2 + 2\pi 3 \times 5.1$

$SA = 203.6 \text{ cm}^2$

on Test & Exam :)