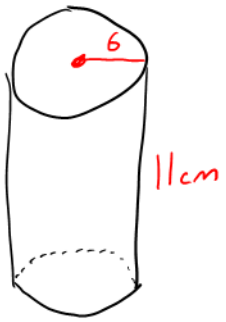
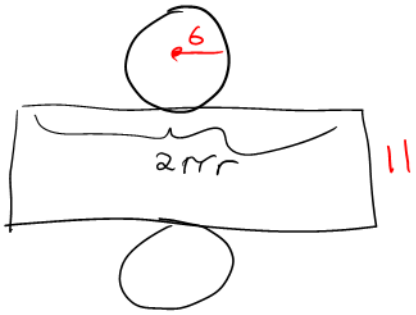
9.3 Cylinders and Cones

1.





$SA = 2\pi r^2 + 2\pi rh$

$SA = 2(3.14)(6)^2 + 2(3.14)(6)(11)$ (36)

$SA = 226.08 + 414.48$

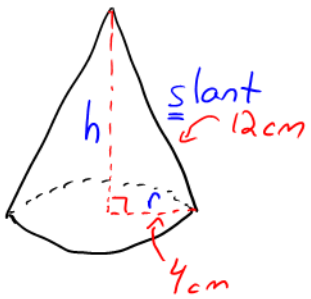
$SA = 640.56\,cm^2$

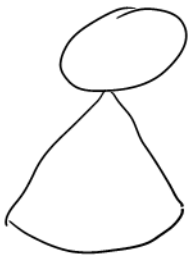
$V = \pi r^2 h$

$V = (3.14)(6)^2(11)$ (36)

$V = 1243.44\,cm^3$

3.





$SA = \pi r^2 + \pi rs$

$SA = (3.14)(4)^2 + (3.14)(4)(12)$ (16)

$SA = 50.24 + 150.72$

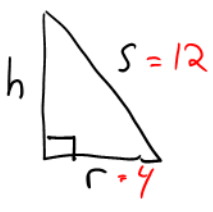
$SA = 200.96\,cm^2$

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

$V = \frac{(3.14)(4)^2(11.3)}{3}$

$V = \frac{567.712}{3} = 189.24\,cm^3$

We don't know h!!



$h^2 + r^2 = s^2$

$h^2 + 4^2 = 12^2$

$h^2 + 16 = 144$

$\sqrt{h^2} = \sqrt{128}$

$h = 11.3$

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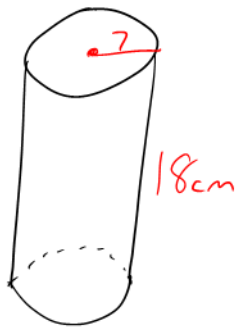
Do Net, SA, V

on boards

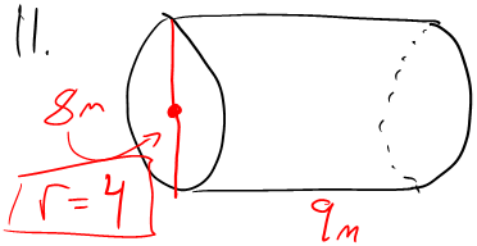
9. 

Lateral area is the surface area of the "height" part, so we don't include the circles.

$L.A. = 2\pi rh$

$= 2(3.14)(7)(18)$

$= 791.28 cm^2$

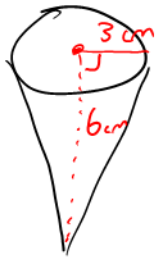
11. 

$S.A. = 2\pi r^2 + 2\pi rh$

$SA = 2(3.14)(4)^2 + 2(3.14)(4)(9)$

$SA = 100.48 + 226.08$

$SA = 326.56 m^2$

17. 

a) 

$h^2 + r^2 = s^2$

$6^2 + 3^2 = s^2$

$36 + 9 = s^2$

$45 = s^2$

$6.7 = s$

b) $S.A. = \cancel{\pi r^2} + \pi rs$

$= (3.14)(3)(6.7)$

$= 63.1 cm^2$

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