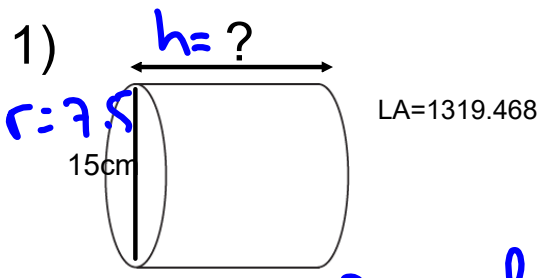
# Working backwards - finding a missing measurement with cylinders

1)



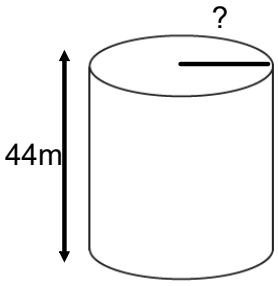

$LA = 2\pi rh$

$1319.468 = 2\pi(7.5)h$

$\frac{1319.468}{47.12} = \frac{47.12h}{47.12}$

$h = 28\text{cm}$

2)



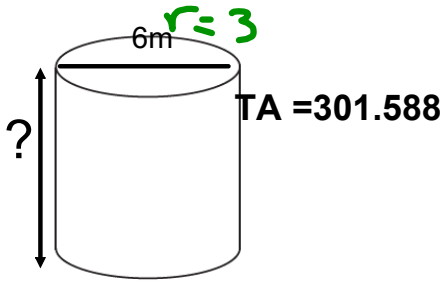

$LA = 2\pi rh$

$3317.52 = 2\pi r(44)$

$\frac{3317.52}{276.46} = \frac{276.46r}{276.46}$

$r = 12\text{ m}$

3)




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

$301.588 = 2\pi(3)h + 2\pi(3)^2$

$301.588 = 18.85h + 56.55$

$\frac{245.038}{18.85} = \frac{18.85h}{18.85}$

$h = 13\text{ m}$