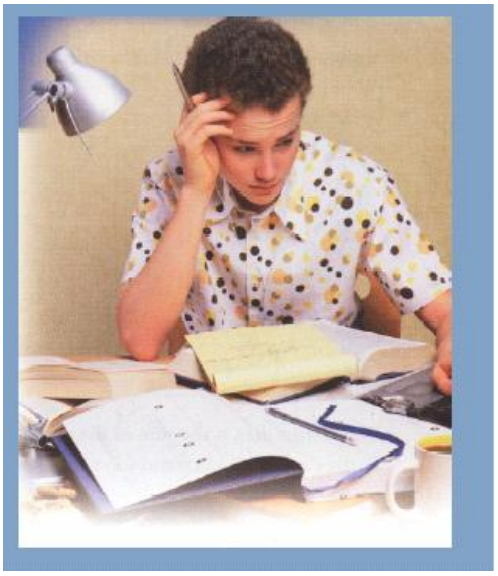


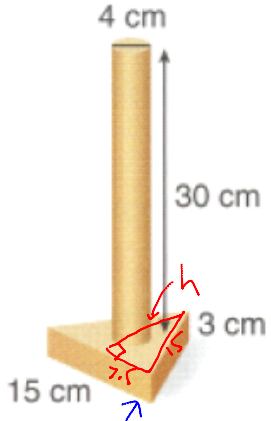
A student designed this stand for a table lamp. How could the student determine the surface area of this stand? What would he need to know?

Strategy?

$SA_{cyl} + SA_{\triangle} - (\text{circle} \times 2)$

$SA_{\triangle} + \text{lateral surf.}$ $\quad 2\pi r + 2\pi rh$

$+ 2\pi r^2 + 2\pi rh - 2\pi r^2$



SA =

$SA_{\square} = 3(15 \times 3) + 2\left(\frac{15 \times 13}{2}\right) =$

$135 + 195$

$330\ cm^2$

706.8

736.9

The base is an equilateral triangle

$SA_{\square} = 2\pi(2)(30)$

$= 376.8$

$330 + 376.8 = 706.8$

$h^2 = 15^2 - 7.5^2$

$h = \sqrt{15^2 - 7.5^2}$

$h \approx 13$