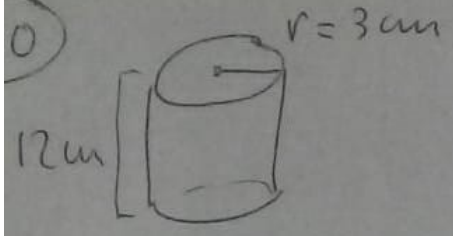
10)



$dh = -0,2\ cm$

$dr = -0,3\ cm.$

ΔV?

$V(h,r) = \pi r^2 h$

$dV = V_h\,(dh) + V_r\,(dr)$

$P(\underset{h}{12}, \underset{r}{3})$

$V_h = \pi r^2 \qquad V_r = 2\pi r h$

$dV = \pi(3\,cm)^2(-0,2\,cm) + 2\pi(3\,cm)(12\,cm)(-0,3\,cm)$

$= -9\pi(0,2)\,cm^3 - 72\pi(0,3)\,cm^3$

$= -73,5\,cm^3$

$\Delta V = -69\,cm^3$