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den 31 januari 2013
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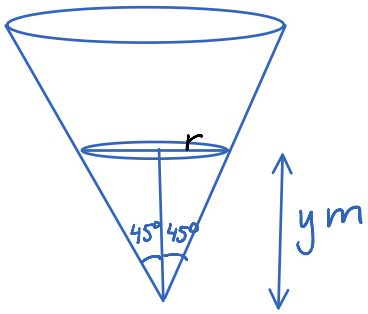


$\frac{dV}{dt} = 7\ m^3/s$ $\frac{dy}{dt}$ sökes

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

$\frac{r}{y} = \tan 45^\circ$ $\tan 45 = 1$

$\frac{r}{y} = 1$

$r = y$

$V = \frac{\pi y^3}{3}$ $\frac{dV}{dy} = \frac{3\pi y^2}{3} = \pi y^2$

$\frac{dV}{dt} = \frac{dV}{dy} \cdot \frac{dy}{dt}$

$7 = \pi y^2 \cdot \frac{dy}{dt}$

$\frac{dy}{dt} = \frac{7}{\pi y^2}$ m/s