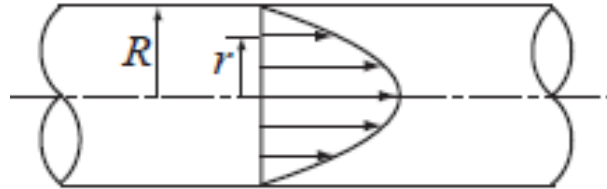


H.W// The flow rate Q (volume of fluid per second) in a round pipe can be calculated by:

$Q = \int_0^r 2\pi r v \cdot dr$, For turbulent flow the velocity profile can be estimated by:

$v = v_{max} \left(1 - \frac{r}{R}\right)^{1/7}$, Write F.P. to determine Q for $R=0.25$ in/s, $v_{max} = 80$ in/s.



Ans: 1.6035 in³/s