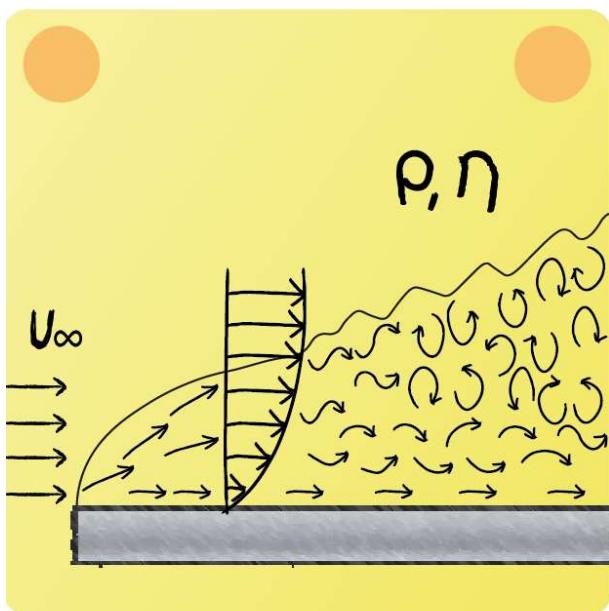


Lecture 6 - Question 1



An ideal gas is flowing over a flat plate. Determine the distance where the transition from laminar to turbulent flow will occur.



$$x_{\text{crit}} = 2 \cdot 10^5 \cdot \frac{\eta}{\rho \cdot u_\infty} = 2 \cdot 10^5 \cdot \frac{1.8 \cdot 10^{-5}}{1.2 \cdot 20} = 0.15 \text{ m}$$