December 9, 2015

NAME

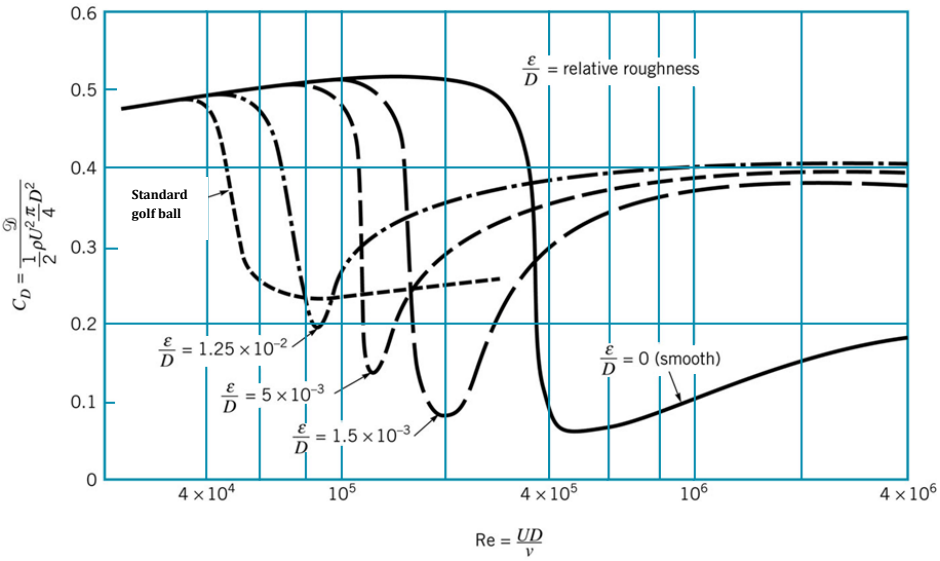
Fluids-ID

Quiz 16. A well-hit golf ball (diameter D = 1.69 in.) can travel at U = 200 ft/s as it leaves the tee. Determine the drag force on (a) a standard golf ball and (b) a smooth golf ball without dimples on its surface (ε/D = 0). Use the chart in Fig. to find appropriate drag coefficients. ($\nu = 1.57 \times 10^{-4}$ ft^2/s; ρ = 0.00238 slugs/ft^3)

For a sphere,

$$\text{Drag} = \frac{1}{2}\rho C_D U^2 \left(\frac{\pi}{4}D^2\right)$$

where D is the diameter.



Note: Attendance (+2 points), format (+1 point)