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Table 6.6	Bernoulli's equation	$\frac{p}{\rho} + \frac{v^2}{2} + gb = \text{constant}$
Key Equations that Arise in Fluids Engineering	Buoyancy force	$F_b = \rho_{\text{fluid}} g V_{\text{displ}}$
	Drag force	
	General	$F_D = \frac{1}{2} \rho v^2 C_D$
	Special case: Sphere with $Re < 1$	$C_D = \frac{24}{Re}$
	Lift force	$F_L = \frac{1}{2} \rho v^2 C_L$
	Pipe flow velocity	$v_{\text{max}} = \frac{R \Delta p}{4 \mu L}$ $v_{\text{avg}} = \frac{1}{2} v_{\text{max}}$ $v = v_{\text{max}} \left(1 - \left(\frac{r}{R} \right)^2 \right)$
	Pressure	$p_1 = p_2 + \rho g h$
	Reynolds number	$Re = \frac{\rho v L}{\mu}$
	Shear stress	$\tau = \mu \frac{dv}{dy}$
	Volumetric flow rate	$q = \frac{\Delta V}{\Delta t}$ $q = A v_{\text{avg}}$ $q = \frac{\pi R^4 \Delta p}{128 \mu L}$ $A_1 v_1 = A_2 v_2$
	Weight	$w = \rho g V$

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