MECHANICAL ADVANTAGE *This equation disregards friction.*	$MA = \frac{F_{out}}{F_{in}} = \frac{d_{in}}{d_{out}}$
EFFICIENCY *This equation accounts for friction.*	$eff = \frac{W_{out}}{W_{in}}$

Chapter 8 Fluid Mechanics

MASS DENSITY	$\rho = \frac{m}{V}$
BUOYANT FORCE *The first equation is for an object that is completely or partially submerged. The second equation is for a floating object.*	$F_B = F_g(\text{displaced fluid}) = m_f g$ $F_B = F_g(\text{object}) = mg$
PRESSURE	$P = \frac{F}{A}$
PASCAL'S PRINCIPLE	Pressure applied to a fluid in a closed container is transmitted equally to every point of the fluid and to the walls of the container.
HYDRAULIC LIFT EQUATION	$F_2 = \frac{A_2}{A_1} F_1$
FLUID PRESSURE AS A FUNCTION OF DEPTH	$P = P_0 + \rho g h$
CONTINUITY EQUATION	$A_1 v_1 = A_2 v_2$
BERNOULLI'S PRINCIPLE	The pressure in a fluid decreases as the fluid's velocity increases.

Chapter 9 Heat

TEMPERATURE CONVERSIONS	$T_F = \frac{9}{5} T_C + 32.0$ $T = T_C + 273.15$