Sections covered: 12.4-12.9, 13.2, 13.4

Function manipulation

2 to 3 variables: $z = f(x, y) \Rightarrow g(x, y, z) = f(x, y) - z$

Partial Derivatives

Derivative of y with respect to x: $\frac{dy}{dx} = -\frac{F_x}{F_y}$

Directional derivative

Gradient: $\nabla f = \langle f_x, f_y, f_z \rangle$