Kinematic Equations

$$\vec{d} = d_i + \vec{V}_i t + \frac{1}{2}\vec{a}\, t^2$$

d_i =inital distance V_i =inital velocity
a = acceleration t = time

$$\vec{V}_f^{\,2} = \vec{v}_i^{\,2} + 2\,\vec{a}\,d$$

V_f final velocity V_i =inital velocity
a = acceleration d = distance

$$\vec{d} = \frac{\vec{V}_i + \vec{V}_f}{2} \cdot t$$

d = distance V_i =inital velocity
V_f = final velocity t = time

$$\vec{V}_f = \vec{V}_i + \vec{a} \cdot t$$

V_f = final velocity V_i =inital velocity
a = acceleration t = time

$$d = \sqrt{(x_f - x_i)^2 + (y_f - y_i)^2}$$

$$d = \sqrt{(x_f - x_i)^2 + (y_f - y_i)^2 + (z_f - z_i)^2}$$

$\vec{v}$ means a complex (angle + magnitude) value. You don't have to treat these equations as multi-dimensional as long as every vector points the same direction. A vector can be (x,y) which is (cosine magnitude, sine magnitude) or (magnitude, angle), (x,y,z) or — magnitude, horzontal angle from 'x' pole toward 'y' pole, vertical angle from 'x' pole to 'z' pole.