Kinematics Equation Sheet

Number	Unused Variable	Equation
1	d	$v_f = v_i + at$
2	a	$d = \bar{V} \cdot t \quad or \quad d = \left(\frac{v_i + v_f}{2}\right) t$
3	v_f	$d = v_i t + \frac{1}{2} a t^2$
4	v_i	$d = v_f t - \frac{1}{2} a t^2$
5	t	$v_f^2 = v_i^2 + 2ad$

$acceleration\ due\ to\ gravity\ g = 9.8\ m/s^2$

Kinematics Variables:

V_i = Initial Velocity, the start of the problem

V_f = Final Velocity, the end of the problem

d = displacement, the change in position between V_i and V_f

a = acceleration which changes V_i to V_f

t = time that it takes to go from V_i and V_f