The following equations will be given on the first exam in this form. All of your solutions for the problems should start from these equations.

EQUATIONS

$\mathbf{v}_{avg} = \Delta\mathbf{r} / \Delta t$

$\mathbf{v} = d\mathbf{r} / dt$

$\mathbf{a}_{avg} = \Delta\mathbf{v} / \Delta t$

$\mathbf{a} = d\mathbf{v} / dt$

$v^2 = v_o^2 + 2a\Delta x$

$\Delta x = v_o t + 1/2at^2$

$v = v_o + at$

$\Delta x = 1/2(v_o + v)t$

$a = v^2 / R$

$v = 2\pi r / T$

$x = -b \pm \text{sq.rt.}(b^2 - 4ac) / 2a$

CONSTANTS

$g = 9.8\ m/s^2$