Answers Exam 1 2015

1. $$-\frac{b}{6}\left(\frac{2H}{g}\right)^{3/2} + v_1\sqrt{\frac{2H}{g}} + 2H = 0$$

2. $$x(t) = \frac{a\sin\theta_2 t^2}{2} + \frac{b\sin\theta_2 t^3}{6} + W\cos\theta_1 t + \overset{0}{\overset{\|}{C}}ost$$

$$y(t) = \frac{a\cos\theta_2 t^2}{2} + \frac{b\cos\theta_2 t^3}{6} + W\sin\theta_1 t + H$$

$$x(t^*) = C$$

$$y(t^*) = D$$

3. $$a_x = \frac{mg\sin\theta + P\sin\Phi - \mu(mg\cos\theta + P\cos\Phi)}{M}$$

$$v_f^2 = 2a_x\frac{H}{\sin\theta}$$