Unit 4: C.P. Physics   Name: _____
Projectile Practice Quiz A-D   /25   Date: _____ Period _____

Formula's: $F_{FR} = \mu\ F_N$ $F = m\ a$ $W = m\ g$ $T = mg\ +/-\ ma$

$$\frac{Sin\ A}{a} = \frac{Sin\ B}{b} = \frac{Sin\ C}{c} \qquad c^2 = a^2 + b^2 - 2\ a\ b\ Cos\ C$$

$$V_f = V_o + a\ t \qquad s = v_o\ t + 1/2\ a\ t^2 \qquad V_f^2 = V_o^2 + 2\ a\ s \qquad V = \frac{V_f + V_o}{2}$$

Directions: Show all your work, label all of your units.

1. A projectile is launched horizontally with a speed of 80.0 m/s. If the projectile is launched 1.5 m
    above the floor, how long does it take the projectile to hit the floor? 5 pts.   Ans: 0.55 sec

2. A soccer ball is kicked into the air at an angle of 38^0 above the horizontal (ground). The initial
    velocity of the ball is 30 m/s.
    a.   How long is the soccer ball in the air? 5 pts.   Ans: 3.78 sec

    b.   What is the horizontal distance traveled by the soccer ball? 5 pts.   Ans: 89.2 m

    c.   What is the maximum height reached by the soccer ball? 5 pts. Ans: 17.5 m

3. A coin rolls along the top of a 1.33 m-high desk with a constant velocity. It reaches the edge of
    the desk and hits the ground 0.25 m from the edge of the desk. What was the velocity of the
    coin as it rolled across the desk? 5 pts. Ans: 0.48 m/s