PS Physics   Name _____
Acceleration Practice 2   Period _____

1. An airplane accelerates down a
    runway at 3.20 m/s^2 for 32.8 s until
    is finally lifts off the ground.
    Determine the distance traveled
    before takeoff.

2. Upton Chuck is riding the giant
    rollercoaster at Great America. If
    Upton free falls for 2.6 seconds,
    what will be his final velocity and
    how far will he fall?
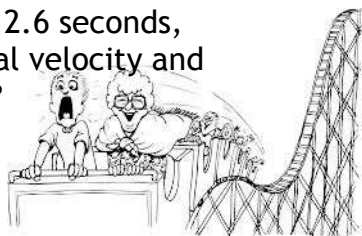
3. A car traveling at 22.4 m/s skids to
    a stop in 2.55 s. Determine the
    skidding distance of the car (assume
    uniform acceleration).

4. A bullet leaves a rifle with a muzzle
    velocity of 521 m/s. While
    accelerating through the barrel of
    the rifle, the bullet moves a
    distance of 0.840 m. Determine the
    acceleration of the bullet (assume a
    uniform acceleration).

5. The observation deck of tall
    skyscraper 370 m above the street.
    Determine the time required for a
    penny to free fall from the deck to
    the street below.

6. A dragster accelerates to a speed of
    112 m/s over a distance of 398 m.
    Determine the acceleration (assume
    uniform) of the dragster.

7. If a car has a constant acceleration
    of 4 m/s^2 starting from rest, how
    far has it traveled after 5 seconds?

8. How long will it take for a falling
    object to reach 108 m/s if its initial
    velocity is 10 m/s?

9. A feather is dropped on the moon
    from a height of 1.40 meters. The
    acceleration of gravity on the moon
    is 1.67 m/s^2. Determine the time for
    the feather to fall to the surface of
    the moon.

10. What is the final velocity of an
    apple if it falls from a 100 m tree?