Corona Week 2

Conservation of Energy

$$mgh + \left(\frac{m}{2}\right)(v^2) = mgh + \left(\frac{m}{2}\right)(v^2)$$

Earlier Spot   Later Spot

1. A ___ kg plant is dropped from a height of ___ m. What will the plant's velocity be just before it hits the ground?

Choose the plant's mass to be between 2 and 6 kg.
Choose the height to be between 20 and 40 m.

2. The softball player hits a pop-up fly with a velocity of _____ m/s straight upward. When it reaches the top
of its path, it will come to a momentary halt before it falls back down. How high up will that be?
Choose the ball's velocity to be between 10 and 40 m/s.
The softball's mass is 0.2 kg.

3. You are going to sled down Mt. Everest. What will your velocity be when you get to the bottom?

Choose your mass to be your weight in pounds divided by 2.2.

8,848 m
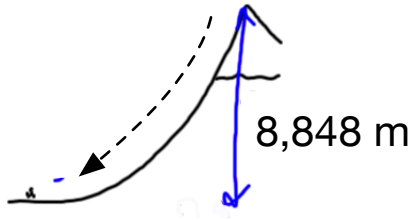
(WOW) 4. Re-do problem #3, but this time figure out how fast you would be going when you are 1,000 m from the bottom.