

Chapter C6: Intro to Energy Practice

Physics I

College of the Atlantic

1. You drop a 5 kg box of tempeh down a well that is 50 meters deep. What is the speed of the box right before it reaches the bottom of the well? Do this problem two ways:
 - (a) Use the ground as the reference point.
 - (b) Use a point ten meters above ground as the reference point.
2.
 - (a) A 0.25 kg TAB mug is dropped the top of a 10 meter platform. What is its speed right before it hits the ground?
 - (b) What is the mug's speed if it is dropped from a 20 platform?
 - (c) What is the speed just before impact of a 0.5kg plate dropped from the 10 meter platform?
3. A TAB mug is thrown from a 10 meter rooftop.
 - (a) When the mug hits the ground its speed is 20 m/s. At what speed was it thrown?
 - (b) Suppose the mug hits the ground at a speed of 10 m/s? In that case, at what speed was it thrown?
4. You throw a TAB mug straight up at 20 miles per hour. How high in the air will it go?
5. How fast would you have to throw an object so that it reached the height of Cadillac mountain?
6. From what height should you drop something if you want it to hit the ground at 10 m/s? From what height should you drop something if you want it to hit the ground at 20 m/s?