Wednesday Reading Assessment: Unit 7, Work and Energy

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1 Memory Bank

- $KE = \frac{1}{2}mv^2$ ... Kinetic energy definition.
- $U_G = mg\Delta y$ ... Gravitational energy
- $W_{\text{net}} = \frac{1}{2}mv_f^2 - \frac{1}{2}mv_i^2$ ... Work energy theorem.

2 Work-Energy Theorem

1. Suppose a 10.0 kg package is accelerated from rest to a final speed of 3 m/s in a time of 1 second. What is the acceleration on the package?

2. What is the net force on the package?

3. What is the work done on the package, if the force is applied through a distance of 1.5 meters?

4. What is the final *kinetic energy* of the package?