

Name: _____ Date: _____

m_r^β **Physics Practice: Work**

In physics, *work* on an object refers to the sum of external forces on the object, applied over a distance. If the force F is constant, and the motion is linear (i.e. movement in a straight line in one direction), then we can write $W = Fd$, where d is the distance traveled.

1. If an object does not move, can any work be done on the object? Explain.

2. If an object is moving, but is not subjected to a net external force, can any work be done on the object? Explain.

3. If an object is moving at constant velocity, can any work be done on the object? Explain.

4. A 100kg object is lifted 2 meters off the surface of the earth. How much work was done?

5. Generalize the previous result. If an object with mass m is lifted h meters from the surface of the earth, how much work was done?