

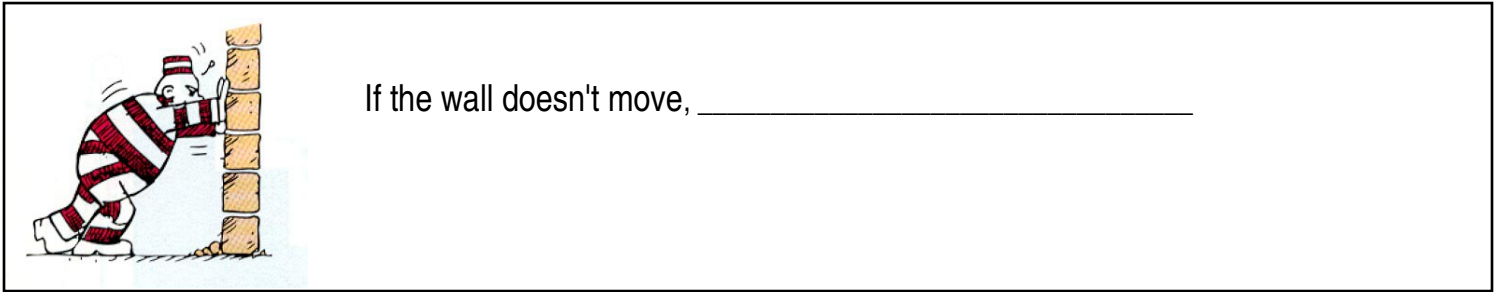
Name: _____ Period: ____ Date: _____

Work

Work is equal to a change in _____

We calculate work by multiplying the _____ exerted on an object by

the _____ the object moves _____



Work = _____

$$W = Fd$$

The amount of work applied depends on:

1 how much force is applied (_____)

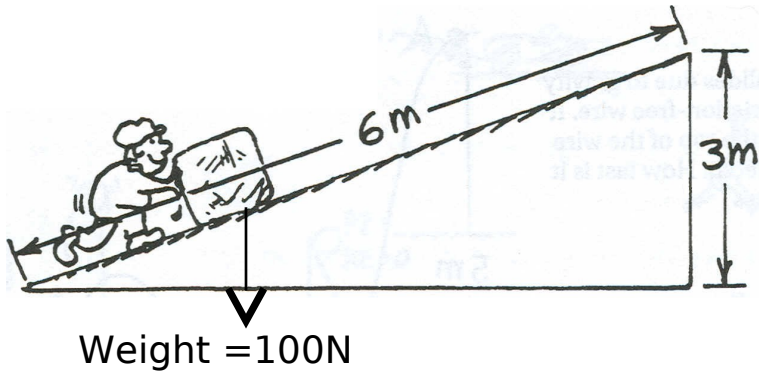
2 how far the force causes the object to move (_____)

The unit of work is a _____ (N·m) or a _____

Examples:

1) How much work is needed to lift an object that weighs 30 N to a height of 5 m?

2) How much work is needed to lift an object that weighs 150 N to a height of 2 m?



3) How much work is done if the 100N box is ***lifted*** to a height of 3 meters?

4) Does he have to apply the same force to slide it up the ramp?

5) How much force would it take?

POWER

Power is _____

The equation for power is

$$\text{Power} = W/t$$

The unit for work is _____

The unit for time is _____

The unit for power is _____ which is called a _____

Examples:

1. 400 Joules of Work are completed in 5 seconds. What is the power?

2. A force of 300 N acts through a distance of 2 meters in 4 seconds. Calculate the work and the power.

