Name: _____ Date: _____

Review Worksheet

Calculating Work

Work has a special meaning in science. It is the product of the force applied to an object and the distance the object moves. The unit of work is the Joule (J)

Work = Force x Distance

W= F x d Work = joules (J) Force = newtons (N) Distance = meters (m)

1. A book weighing 1.0 newton is lifted 2 meters. How much work was done?

Formula	Substitution	Final Answer with Units

2. A force of 15 newtons is used to push a box along the floor a distance of 3 meters. How much work was done?

Formula	Substitution	Final Answer with Units

3. It took 50 joules to push a chair 5 meters across the floor. With what force was the chair pushed?

Formula	Substitution	Final Answer with Units

4. A force of 100 newtons was necessary to lift a rock. A total of 150 joules of work was done. How far was the rock lifted?

Formula	Substitution	Final Answer with Units

5. It took 500 newtons of force to push a car 4 meters. How much work was done?

Formula	Substitution	Final Answer with Units

6. A young man exerted a force of 9,000 N on a stalled car but was unable to move it. How much work was done?

Formula	Substitution	Final Answer with Units

Calculating Power

Power is the amount of work done per unit of time. The unit for power, joules/second, is the watt.

Power = work/time **work = joules** **time = seconds**

1. What is the power of a kitchen blender if it can perform 3,750 joules of work in 15 seconds?

Formula	Substitution	Final Answer with Units

2. How much work is done using a 500-watt microwave oven for 300 seconds.

Formula	Substitution	Final Answer with Units

3. How much work is done using a 60-watt light bulb for 3,600 seconds?

Formula	Substitution	Final Answer with Units