

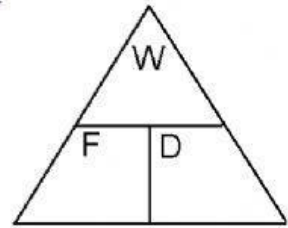
Work has a special meaning in science. It is the product of the force applied to an object and the distance the object moves. The unit of work is the joule (J).

$$W = \text{Force} \times \text{Distance}$$

$$W = F \times d$$

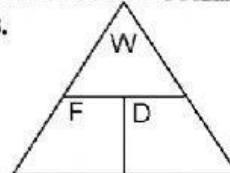
Force = newtons

Distance = meters



Solve the following problems.

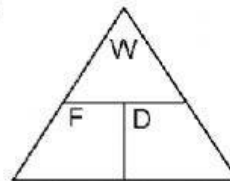
1. A book weighing 1.0 newton is lifted 2 meters.
How much work was done?



Answer Units

_____ J N m

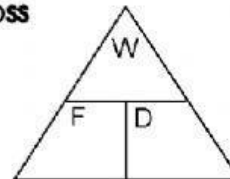
2. A force of 15 newtons is used to push a box
along the floor a distance of 3 meters.
How much work was done?



Answer Units

_____ J N m

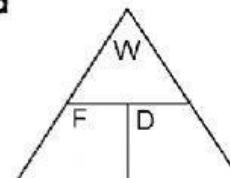
3. It took 50 joules to push a chair 5 meters across
the floor. With what force was the
chair pushed?



Answer Units

_____ J N m

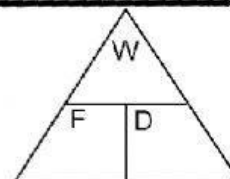
4. A force of 100 newtons was necessary to lift a
rock. A total of 150 joules of work was done.
How far was the rock lifted?



Answer Units

_____ J N m

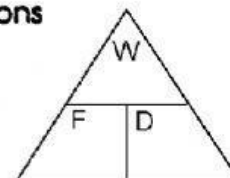
5. It took 500 newtons of force to push a car
4 meters. How much work was done?



Answer Units

_____ J N m

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



Answer Units

_____ J N m