

# Work

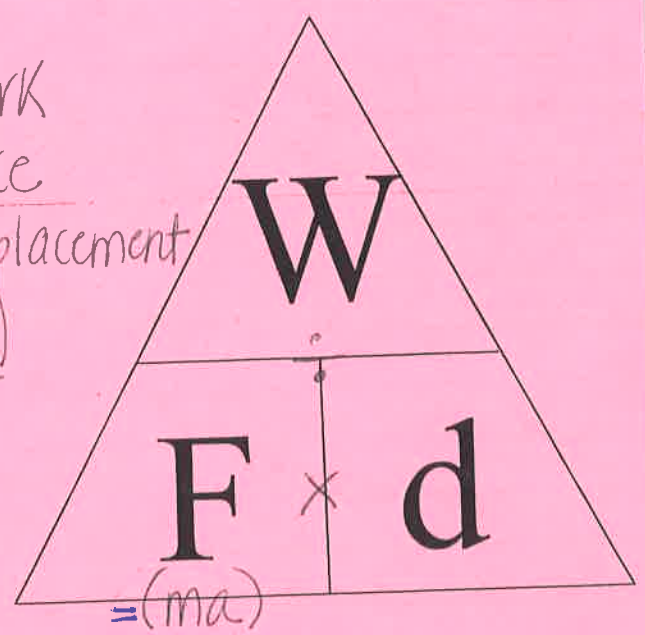
W = Work  
 F = force  
 d = displacement

$$W = mad$$

$$W = F \times d$$

$$d = \frac{W}{F}$$

$$F = \frac{W}{d}$$



What is it?  
 (definition)

A form of energy  
 Energy is the ability to cause a change.

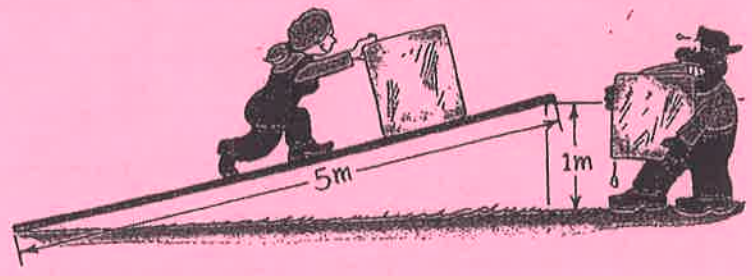
## Important Idea

To do work, force must cause displacement because a vertical force can never cause a horizontal displacement and a horizontal force can never cause a vertical displacement.

For work to be done

Exertion of a force

Displacement of something by that force



Measurement	Symbol	Units
Work	W	[J] Joules = N·m
Force	F	[N] Newtons
Displacement	d	[m] meters

# Work & Energy

Work is done when a force causes something to move a distance.

Work is a form of energy.

For work to be done, the force and the displacement have to be parallel to each other.

