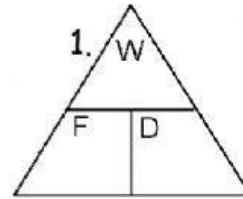


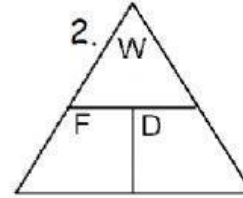
$$\text{Work} = \text{Force} * \text{Distance}$$

1. Larry pushed a chair, which weighed 120 newtons, a distance of 5 meters. Calculate work.



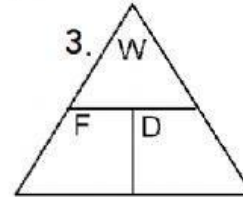
answer unit
J N m

2. Molly lifted her 60 newton suitcase .2 meters off the ground. Calculate work.



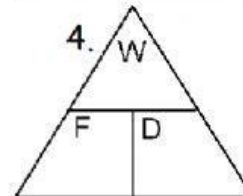
answer unit
J N m

3. A force of 40 newtons was used to push a box a distance of 10 meters across the room. Calculate work.



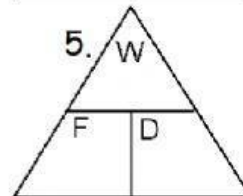
answer unit
J N m

4. A force of 130 newtons was applied in lifting a concrete block 1.5 meters off the ground. Calculate work.



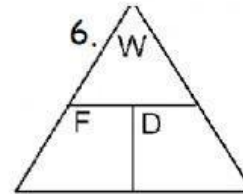
answer unit
J N m

5. A grandfather lifted his grandchild, out of the playpen, a distance of 2 meters. The baby weighed 20 newtons. Calculate work.



answer unit
J N m

6. The grandfather held his 20 newton grandchild for 20 minutes. Calculate work.



answer unit
J N m

7. To calculate work you need to know two of these: mass power force acceleration distance weight.

8. The effort force is force the machine produces is the force put into the machine, the resistance force is force the machine produces is the force put into the machine.

9. What is the *mechanical advantage* of a machine?

It is the number of times a machine adds to subtracts from multiplies divides the input force.