

Name: _____ Block: _____ Date: _____

Work Practice Problems

Show all work! No naked numbers!

- 1) Amy uses 20N of force to push a lawn mower 10 meters. How much work does she do?
- 2) How much work does an elephant do while moving a circus wagon 20 meters with a pulling force of 200N?
- 3) Alex applies 350 N of force to move his stalled car 40 m, how much work did Alex do?
- 4) Tommy does 15 Joules of work to push the pencil over 1 meter. How much force did he use?
- 5) Angela uses a force of 25 Newtons to lift her grocery bag while doing 50 Joules of work. How far did she lift the grocery bags?
- 6) The baseball player does 1234 Joules of work when hitting a baseball into left field. Assuming the baseball landed 100 meters away from home plate, how much force did the player use to hit the ball?

Explain the following situations with diagrams and labels.

Was there work done? Describe the energy in the situation as well.

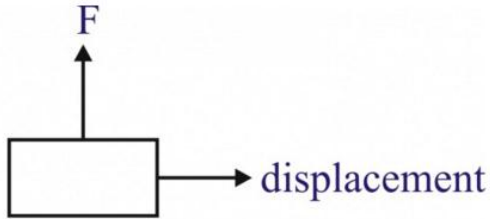


1. Answer the questions for this block.

2. Answer the questions for this block.



3. Answer the questions this block.



4. An ant sits on the back of a mouse. The mouse carries the ant across the floor for a distance of 10 meters. Answer the question about the mouse.

5. JD is setting a bucket of water on the ground.

6. You are lifting a 45-newton bag of mulch.

Now you are carrying the bag to the garden.

You set the bag down in the garden.

Work Practice Problems Worksheet #1 ANSWER KEY

- 1) Amy uses 20N of force to push a lawn mower 10 meters. How much work does she do?

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

$$\text{Work} = 20\text{N} \times 10\text{m}$$

$$\text{Work} = 200 \text{ J}$$

- 2) How much work does an elephant do while moving a circus wagon 20 meters with a pulling force of 200N?

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

$$\text{Work} = 200\text{N} \times 20\text{m}$$

$$\text{Work} = 4000 \text{ J}$$

- 3) Tommy does 15 Joules of work to push the pencil over 1 meter. How much force did he use?

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

$$\text{Force} = 15 \text{ J} / 1 \text{ m}$$

$$\text{Force} = 15 \text{ N}$$

- 4) Angela uses a force of 25 Newtons to lift her grocery bag while doing 50 Joules of work. How far did she lift the grocery bags?

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

$$\text{Distance} = 50 \text{ J} / 25 \text{ N}$$

$$\text{Distance} = 2 \text{ m}$$

- 5) The baseball player does 1234 Joules of work when hitting a baseball into left field. Assuming the baseball landed 100 meters away from home plate, how much force did the player use to hit the ball?

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

$$\text{Force} = 1234 \text{ J} / 100 \text{ m}$$

$$\text{Force} = 12.34 \text{ N}$$