

Work Worksheet 3

1. Is the person doing work?
Give reasoning for your answer.
 - a. When pushing a 1000 N car 10 m.
 - b. Lifting a rock off the ground.
 - c. Holding a book in your hands.
 - d. Pushing hard on a brick wall.
2. How much work is done when a 5 N force moves a block 4 m?
3. How much work is done when a 100 N force moves a block 59 m?
4. Fred applies 350 N of force to move his stalled car 40 m, how much work did Fred do?
5. You move a 25 N object 5 m. How much work did you do?
6. You carry a 20 N bag of dog food up a 6 m flight of stairs. How much work did you do?
7. How much energy do you give a 200N couch if you push it 35 meters?
8. How much energy do you give a sumo wrestler if you push him with all your might (150N worth of force) for 1 hour and he does not move at all?
9. Which is more work, pushing with 115 N over 15 m or lifting 20 N 10 m?

Consider a 10 kg mass sitting on the ramp shown below then use the following diagram for question 10:

10. If it takes 25 N of force to slide the box on the ramp, how much work will it take to slide the box up the ramp?