

## Work Worksheet

Integrated Science: Physics/Design

Name: \_\_\_\_\_ Per \_\_\_

1. You pull your sled through the snow a distance of 500 m with a horizontal force of 200 N. How much work did you do?
2. You did 150. J of work lifting a 120.-N backpack. How high did you lift the backpack?
3. A crane does 625 J of work to lift a boulder a distance of 25.0 m. How much did the boulder weigh? (Hint: The weight of an object is considered to be a force in units of newtons.)
4. A bulldozer does 30,000. J of work to push another boulder a distance of 20. m. How much force is applied to push the boulder?
5. A 450.-N gymnast jumps upward a distance of 0.50 m to reach the uneven parallel bars. How much work did she do?
6. How much work does a mother do if she lifts each of her twin babies upward 1.0 m? Each baby weighs 90. N.

7. It took a 500.-N ballerina a force of 250 J to lift herself upward through the air. How high did she jump?
  
  
  
  
  
  
  
  
  
  
8. A book weighing 10. N is lifted 2 m. How much work was done?
  
  
  
  
  
  
  
  
  
  
9. A force of 15 N is used to push a box along the floor a distance of 3 meters. How much work was done?
  
  
  
  
  
  
  
  
  
  
10. It took 50 J to push a chair 5 meters across the floor. With what force was the chair pushed?
  
  
  
  
  
  
  
  
  
  
11. A force of 100 N was necessary to lift a rock. A total of 150 J of work was done. How far was the rock lifted?
  
  
  
  
  
  
  
  
  
  
12. A young man exerted a force of 9,000 N on a stalled car but was unable to move it. How much work was done?