**D= 4.1m**

1. Calculate the amount of work done when moving a 567N crate a distance of 20 meters.

**Yes, because the object is moving in the direction of the force. Therefore, the person is doing work.**

2.  A fallen tree is lifted 2.75 meters. If the crane used 5,323N to lift it determine the amount of work?

**Spring Scale**

3.  If it took a bulldozer 567.6 joules of work to push a mound of dirt 30.5 meters, how much force did the bulldozer have to apply?

**D=59.7 m**

4.  A frontend loader needed to apply 137 newtons of force to lift a rock.  A total of 223 joules of work was done.  How far was the rock lifted?

**F =21.9 N**

5.  A young boy applied a force of 2,550 newtons on his St. Bernard dog who is sitting on the boy's tennis shoes.  He was unable to move the dog.  How much work did he do trying to push the dog?

**No, the object you are holding is not moving in the same direction of the force. Therefore, no work is being performed.**

6.  If it takes 68 joules of work to push a desk chair 30m, how much force would be needed?

**D= 1.6m**

7.  If a long distance runner with a weight of 596.82 newtons does 35,674.7 joules of work during a portion of a race, what distance will she cover during that portion?

**W= 11,340J**

8.  If a weight lifter pushes a sled with a mass of 125.7kg doing 5,023 joules of work, what distance did he move the barbells?   Remember that you need a force, not a mass.  You must first calculate the force in order to complete your solution. **HINT:**Weight is a force.  Weight on earth is determined by multiplying an object's mass times earth's gravitational pull (9.8m/s2   ).

**W= 0J**

9.  Children are sledding on a hill.  One little girl pulls her sled back up the hill and does 379.5 joules of work while pulling it back up the 17.3 meter hill.  What amount of force did she exert on the sled?

**W= 2691 J**

10. What two things do you need to know in order to find out how much work is done on an object?

**F= 18.6 N**

11. What science tool do you use to find the amount of force on an object?

**W= Force x Distance**

12. What is the physics definition of work?

**Joule**

13. Determine the speed of an object that travels a distance of 25m in 65 seconds.

**W=14638.25 J**

14. Are you applying work to the lawn mower if you are mowing with a push mower. Please explain.

**2.2N**

15. Are you doing work to a bag of groceries if you are carrying to the car to put up.

**S=.38 m/s**

16. What is the unit for work?

**s=14.0 km/h**

17. What is the unit for Force?

**S= d/t**

18. You push a car forwards with a force of 256N a distance of 13m. Calculate the amount of work done on the car.

**Newton**

19. Calculate the speed of a person running 42.1km in 3 hours

**Force and Distance**

20. Calculate the work done on an object if it weighed 26kg. The object also moved with an acceleration of .23m/s2 and a distance of 45 m in the direction of the force. (HInt: you will use two different equations)

**An object has to move in the direction of the force**

21. What is the equation for work?

**W=3328 J**

22. What is the equation for speed?