

Force and Work - Classwork

$$W = Fd$$

Measurement	Unit
Work	
Force	
distance	

Solve each problem. Write the formula, show plugging in the numbers, and circle your answer.

1. 11 N, 3 m

4. 8 J, 2 m

7. 36 J, 3 N

2. 50 N, 0 m

5. 9 J, 3 m

8. 0 J, 10 N

3. 25 N, 5 m

6. 20 J, 10 m

9. 64 J, 8 N

10. A jogger has a force of 200 N and runs 10 m, how much work did they do?

11. A fork lift moves 30 m carrying a 1,000 N box across the warehouse floor at a height of 2 m. How much work is done by the fork lift on the box? (Hint: The box stays at 2 m.)

12. A football is thrown with 60 N of force. The quarterback did 600 J of work. How far did the football fly?

13. A baseball flies 400 m after being struck with 3600 N of force by the batter. How much force was applied to the baseball?

14. A football player runs 50 m and uses 100 N of force. A swimmer swims 50 m and uses 110 N of force. Who does more work? Why?

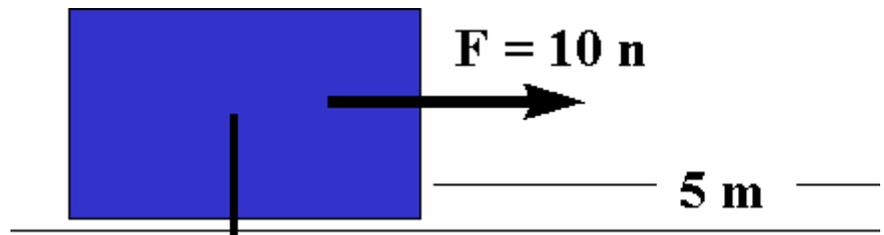
Force and Work – Homework

$$W = Fd$$

Solve each problem. Write the formula, show plugging in the numbers, and circle your answer.

1. How much work was done on a hockey puck that had a force of 20N and a distance of 5m?
2. How much work is required to move a car 10 meters with a force of 100N?
3. How much work was done on a paper football with a force of .5N and a distance of 2m?
4. How much force is required to do 50J of work over a distance of 10m?
5. How far would a rocket go if it had a force of 25N and 100J of work were done?
6. How far would an object travel if 100J of work and a force of 40N were applied?
7. How much force is needed to do 1000J of work on a tennis ball over a distance of 100m?
8. A young boy applied a force of 2,500 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?

9. How much work would be done on the box to the right?



10. It takes 1500 J of work to move the box on the truck. Why does the ramp allow a person to use less force to move the box?

