

Name _____ Period _____ Date _____

Power, Work, and Force I

$$P = W / t, W = Fd, F = ma \quad a = 9.8 \text{ m/sec}^2$$

1. How much power is needed to do 648 Joules of work in 100 seconds?
2. If 478 watts of power are used in 14 seconds, how much work was done?
3. How long does it take to do 432 joules of work with 75 watts of power?
4. If it takes 726 watts of power to move a mass 36 meters in 14 seconds, what is the mass?
5. How much power is used to move a 25 kg mass 8 meters in 15 seconds?
6. How long does it take to do 278 Joules of work with 17 watts?
7. If an object has a mass of 47 kg and it is moved 27 meters in 60 seconds, how much power was used?
8. What is the mass of an object if it took 270 J of work to move it 15 meters?
9. How much power is used to move a 5 kg mass 28 meters in 8 seconds?
10. If 270 watts of power is used in 42 seconds, how much work was done?
11. If an object with a mass of 245 kg is moved 76 meters in 18 seconds, how much power is used?