

DO NOT TURN THIS IN – Keep for homework.

1. Give the equation for work:
2. The units for work are: The units for force are: The units of distance are:
3. Look at Figure 5.2. Which force does not do any work on the box?
4. Using the equation for work, how much work is done by a 3 N force over 5 meters?
5. Can the work output of a machine ever be more than the input?
6. In a real machine can the efficiency ever be 100%?
7. What machine has an efficiency of over 95%?
8. The rate at which work is done is called:
9. Give the equation for power (put units in parenthesis):
10. If you did 30 J of work in 10 seconds how much power did you use?
11. Energy is the:
12. Something with energy has the ability to create a f _____; and anything that can create a f _____ can create m _____.
13. The units for energy are: this is the same as for:
14. Potential energy is energy of p _____. (Answer is NOT “potential”.)
15. To have more potential energy, would you need to be higher or lower from the ground?
16. Give the equation for potential energy (with units):
17. When do objects with potential energy give up their energy?
18. The other kind of energy is k _____.
19. Give the equation for kinetic energy (with units):
20. Which has more kinetic energy a fast car or a slow car?
21. Write the Law of Conservation of Energy:

22. Using the Law of Conservation of Energy, when a ball is thrown up into the air, is the energy lost?
23. When a ball is thrown, it has speed (or velocity), which kind of energy does it have?
24. When a ball is thrown straight up it slows down. What kind of energy is it gaining as it goes up?
25. Give three other kinds of energy:
26. Food energy is really called: c _____ e _____.
27. On pages 87 – 88, the book talks about skating up and down a hill. It talks about four kinds of energy, what are they?
28. What is radiant energy?
29. Where does electrical energy really come from?