

Power Problems

Physical Science and Technology

1. What is the definition of power (NOT the formula - the definition!)?
2. What is the formula for power?
3. What is the metric unit of power?
4. In order for the equations and units above to be calculated properly, you need to make sure that you have made any measurements of time, distance, and mass into the proper units. What are the appropriate units of:
 - a. Time: _____
 - b. Distance: _____
 - c. Mass: _____
5. If a frog pulls a car for 17.6 m with a force of 17.8 Newtons for 7 seconds, how much power was the frog exerting? (Use the Five Steps)
6. If a cat pushes a bike over a distance of 7 meters with a force of 87.6 Newtons for 4.88 seconds, how much power was the cat exerting? (Use the Five Steps)
7. How much work can a bunny do in 17.2 seconds if it can generate 992.4 Watts of power? (Use the Five Steps)
8. A monkey riding a unicycle can produce about 44.8 Watts of power. If the monkey rides for 452.6 seconds, how much work did it do? (Use the Five Steps)
9. A chicken can generate 432.54 Watts of power. If the chicken runs for 322.7 seconds and travels 321 m, how much force did the chicken generate? (Use the Five Steps)
10. A mosquito can generate 0.0194 Watts of power. If it takes the mosquito 0.56 Newtons to lift a small piece of cheese, how long would it take the mosquito to lift the cheese 773.4 meters? (Use the Five Steps)