

Unit 3, Digital Lesson 1 : Work, Energy & Power

Work

1. Which is more powerful, a snowplow or a person shoveling snow? Why?

2. Is reading or studying work? _____

3. The scientific definition of work is:

4. The formula for work is:

_____ = _____ x _____

5. A _____ must cause an object to _____ a
_____ in order to do _____.

6. Write some examples of work being done or NOT done:

- _____
- _____
- _____
- _____

7. Using the work formula, calculate the amount of work being done in the example:

Energy

8. Energy is the capacity to do _____.

9. _____ and energy are measured using the same unit, the _____ or _____.

10. A student pushes a shopping cart forward with a force of 50 Newtons. He pushes the cart a distance of 2 meters. How much work is done on the cart? (**$W = \text{force} \times \text{distance}$**)

What is power?

11. Power is the _____ at which _____ is done or _____ is _____.

12. We can calculate power if we know the _____ used to do the work and the _____ it took to do the work.

13. Write out the soccer player kick power calculation:

14. How are force, work, and power related?