

Work, Power, and Energy Guided Research

Answer the following questions using your iPad. Make sure you look up the Physics definition for the terms and not just the general definition. The last four questions are problems that you need to work out. Show all work including givens, formula, units, and final answer.

1. What is work?

2. What are the units of work?

3. Who does more work, a small person walking up the stairs or a big person walking up the stairs? Why?

4. What is power?

5. What are the units of power?

6. What is energy?

7. What are the units of energy?

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8. What is potential energy?

9. What are the units of potential energy?

10. What is kinetic energy?

11. What are the units of kinetic energy?

12. What is the formula for work? Label each variable in the formula along with its units.

13. What is the formula for power? Label each variable in the formula along with its units.

14. What is the formula for potential energy? Label each variable in the formula along with its units.

15. What is the formula for kinetic energy? Label each variable in the formula along with its units.

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16. Nancy pushes a crate with a force of 50N for a distance of 3m. How much work did she do?

17. Travis does 500J of work in 2s, what is his power output?

18. A cliff diver has a mass of 70kg and stands 20m above the surface of the water. What is her potential energy?

19. A 750kg car is moving at 18m/s, what is its kinetic energy?