

Name _____
Science Period _____

Date _____
Work and Power WS #2

1. Which of the following is having work done on it? (Circle all that apply.)
- a. a grocery bag as you lift it up
 - b. a crane moving dirt
 - c. a crate as you push it along the floor
 - d. a person sitting on a bench



2. Renatta Gass is out with her friends. Misfortune occurs and Renatta and her friends find themselves getting a *workout*. They apply a cumulative force of 1080 N to push the car 218 m to the nearest fuel station. Determine the work done on the car.

3. Two physics students, Will N. Andable and Ben Pumpiniron, are in the weightlifting room. Will lifts with a force of 100N a barbell over his head 10 times in one minute. Ben lifts the barbell over his head 10 times in 10 seconds with the same force..

Who does the most work? _____
(show work)

Who delivers the most power? _____



4. When doing a *chin-up*, Vicki Viscosity lifts her body a distance of 0.25 meters in 2 seconds with a force of 42N. What is the power delivered by the student's biceps?

5. A 600 kg great white shark is lurking below an observation cage. His movement is being studied from a series of motion sensors below the boat. The shark leisurely charges the cage, strikes it and makes the cage rattle. Later, the shark returns for another run at the cage. The shark strikes the cage with 12,800 N of force. The shark traveled for 10 m in making its run. The cage is designed to withstand 124,500 N-m of "work" before it breaks. Should Dr. Irwin in the cage be worried? Explain.



6. How is work defined in the physics world?

7. Design your own **WORK** problem with solution.

8. How is power defined in the physics world?

7. Design your own **POWER** problem with solution.