Name:

Power Practice Problems

1. A set of pulleys lifts a piano and does 3,356 joules of work. If the piano is lifted in 75 seconds, how much power is used?

2. What is the power of an electric toothbrush if it can do 755.8 joulles of work in 75 seconds?

3. How much work is done in order to cook a bag of popcorn in a 500 watt microwave oven for 5.5 minutes?

4. Sara and Josh do the exact same amount of work. Sara does the work in 2.3 hours and Josh does it in 2.5 hours. Who is more powerful? Explain.

5. A dock worker lifts a 375N crate a distance of 0.5m over his head in 2.3 seconds. What is his power output?
   Hint: You must do a calculation before you can begin to solve for power.

6. An athlete is using the row machine in the gym. She does 3245 joulles of work on the oars in 72 seconds. What is her power output?

7. John is walking to class up the front staircase. He weighs 595N and the stairs are 3.15 meters long. Calculate his power output if he climbs the stairs in 15.2 seconds.