

# CALCULATING POWER

Name \_\_\_\_\_

Power is the amount of work done per unit of time. The unit for power, joules/second, is the watt.

$$\text{Power} = \frac{\text{work}}{\text{time}}$$

work = joules  
time = seconds

Solve the following problems.

1. A set of pulleys is used to lift a piano weighing 1,000 newtons. The piano is lifted 3 meters in 60 seconds. How much power is used?

Answer: \_\_\_\_\_

2. How much power is used if a force of 35 newtons is used to push a box a distance of 10 meters in 5 seconds?

Answer: \_\_\_\_\_

3. What is the power of a kitchen blender if it can perform 3,750 joules of work in 15 seconds?

Answer: \_\_\_\_\_

4. How much work is done using a 500-watt microwave oven for 5 minutes?

Answer: \_\_\_\_\_

5. How much work is done using a 60-watt light bulb for 1 hour?

Answer: \_\_\_\_\_