Understanding Power

Directions Choose the word or words from the box that best complete each sentence.

force
joules
kilowatts
power
rate
second
watt
watts

1. Power is a measure of the _____ at which you do work.
2. Work measures the amount of _____ used to move an object a certain distance.
3. Work divided by time equals _____.
4. The units of measure for power are _____ per _____, or _____.
5. A _____ is 1 joule of work done in 1 second.
6. Usually, power is measured in _____, or 1,000-watt units.

Directions Use the formula to find each answer.

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

7. Alex pushed a stroller 2 blocks in 3 minutes. Then he pushed it 2 more blocks in 2 minutes. When did he use more power?

_____

8. How much power would it take to move a chair 5 meters in 15 seconds using a force of 51 newtons?

_____

9. A man can use a snowblower to move snow in 5 minutes. If he moves it with a shovel, it will take 20 minutes. He will use more power with which process?

_____

10. A 600-newton diver dives off a 10-meter platform. If it takes 2 seconds to hit the water, what is the diver's power?

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