

## Wind Power! Math Worksheet Answers

1. What is the power produced by a wind generator that produces 500 J of electrical energy in 2 seconds?

Use  $P = E \div t$

where **P** = power (W), **E** = energy (J) and **t** = time in seconds.

$$E = \underline{500} \text{ J}$$

$$t = \underline{2} \text{ seconds}$$

$$E \div t = \underline{250} \text{ W}$$

This is the power (P) produced.

2. How much electrical energy is produced in 3 seconds by a wind generator that has a power out of 1000 W?

Use.  $E = P \times t$

$$P = \underline{1000} \text{ W}$$

$$T = \underline{3} \text{ seconds}$$

$$P \times t = \underline{3000} \text{ J}$$

This is the energy (E) produced.

3. A large wind generator has a power output of 500 W. How long does it take to produce 500 J of electrical energy?

Use  $t = E \div P$

$$E = \underline{500} \text{ J}$$

$$P = \underline{500} \text{ W}$$

$$E \div P = \underline{1} \text{ seconds}$$

This is the time in seconds that it takes.