
LEARNING OBJECTIVE:

DO NOW:

1. How much work does an elephant do while moving a circus wagon 20 meters with a pulling force of 200N?

2. Frank does 2400J of work in climbing a set of stairs. If he does the work in 6 seconds, what is his power output?

CLASS REVIEW:

Work (J) = Force (N) x Distance (m)

Work equals force times distance.

Power (watts) = $\frac{\text{Work (J)}}{\text{Time (s)}}$

Power equals work divided by time.

When we calculate work, we are figuring out how much energy it takes to move an object a certain distance.

No matter _____

Power is how much work is done in a certain amount of time.

If a person does the same work as another person, _____

EXTENDED PRACTICE:

Amy pushes a lawn mower with a weight of 50 N for a distance of 10 meters. She completes this work in 25 seconds.

1. How much work does Amy do?

2. How much power does Amy use?

Michael pushes the same lawn mower as Amy (50 N) for the same distance (10 meters). He completes the work in 20 seconds.

3. How much work does Michael do?

4. How much power does Michael use?

5. Write a short paragraph (4 sentences minimum) to explain why Amy and Michael did the same amount of work, but one person's power is greater.