Content Mastery

Work and Machines

Directions: Complete the concept map using the terms in the list below.





Directions: Use the formula work = force \times distance to calculate the answers to each of the following questions.

1. A box is pushed 40 m by a mover. The amount of work done was 2,240 J. How much force was exerted on the box?

2. A person expended 500 newtons to move a full wheelbarrow 30 meters. How much work was done?

Directions: Use the formula power = work/time to calculate the power required in each of the following.3. A weightlifter lifts a 1,250-N barbell 2 m in 3 s. How much power was used to lift the barbell?

4. A crane lifts a 35,000-N steel girder a distance of 25 m in 45 s. How much power did the crane require to lift the girder? Write your answers in kilowatts.