

Energy Homework

1. A horse pulls a carriage with a force of 300 N a distance 10 m.

i) Calculate the work done by the horse.

ii) Suppose the force is balanced. Write down the energy change.

2. A boy pulls a block of ice with a force of 50 N a distance 10 m.

i) Calculate the work done by the boy.

ii) Suppose the force is unbalanced. Write down the energy change.

3. Calculate the kinetic energy of 200 g ball travelling at 20 ms^{-1} .

4. A car of mass 100 kg has a kinetic energy of 1000 J, calculate its speed.

5. A 2.0 kg block is at a height of 50 m.

i) Calculate its potential energy.

ii) Write down its energy change as it falls.

III) Calculate its speed just before it hits the ground.

6. A motor has a power rating of 60 W. Calculate the amount of energy it will give the toy car in 60 s?