Physics 11 - Practice Questions

Unit: 6.1 Energy - Work

1. How much work is done on a 10.0 kg mass by Earth’s gravitational field when the mass drops a distance of 5.0m?
2. A girl uses a 3.0 m long ramp to push her 110 kg motorbike up to a trailer. The floor of the trailer is 1.2 m above the ground. How much work is done on the motorbike?
3. A hiker carries a 25 kg load up a hill at a steady speed through a vertical height of 350 m. How much work does she do on the load?
4. The force of gravity on a box is 100.0 N. the coefficient of friction between the floor and the box is 0.250. How much work is done when the ox is pushed along the floor, at a steady speed, for a distance of 15.0m?
5. How powerful (in horsepower) is a motor that can lift a 500.0 kg load through a height of 12.0 m in a time of 12s. (1 HP = 750W)
6. How much energy is consumed by a 100.0 W light bulb, if it is left on for 12.0 hr?