

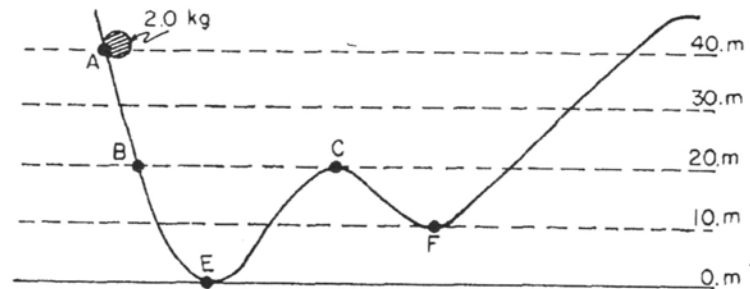
Energy

8. A 0.50-kilogram ball is thrown vertically upward with an initial kinetic energy of 25 joules. Approximately how high will the ball rise? [Neglect air resistance.]
9. A 20.-kilogram object strikes the ground with 1,960 joules of kinetic energy after falling freely from rest. How far above the ground was the object when it was released?
10. Which device transforms mechanical energy into electrical energy?
11. Which type of energy conversion occurs in an electric motor?
12. A baseball bat strikes a ball with an average force of 2.0×10^4 Newtons. If the bat stays in contact with the ball for a distance of 5.0×10^{-3} meter, what kinetic energy will the ball acquire from the bat?

13. As an object falls freely in a vacuum, its total energy

14. Energy is measured in the same units as

Base your answers to questions 15 and 16 on the diagram below. Which represents a 2.0-kilogram mass placed on a frictionless track at point A and released from rest. Assume the gravitational potential energy of the system to be zero at point E.



15. Compared to the kinetic energy of the mass at point B, the kinetic energy of the mass at point E is
16. As the mass travels along the track, the maximum height it will reach above point E will be closest to