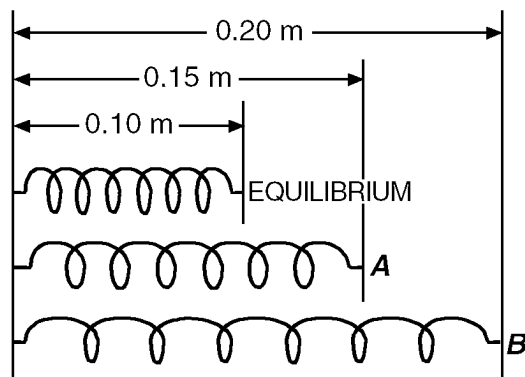
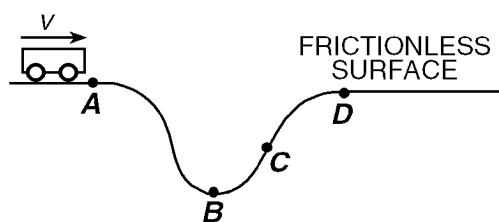


- 6) A 0.10-meter spring is stretched from equilibrium to position A and then to position B as shown in the diagram below.



Compared to the spring's potential energy at A , what is its potential energy at B ?

- A) the same B) four times as great C) twice as great D) half as great
- 7) The diagram below represents a cart traveling from left to right along a frictionless surface with an initial speed of v .



At which point is the gravitational potential energy of the cart *least*?

- A) A B) B C) C D) D
- 8) An object gains 10. joules of potential energy as it is lifted vertically 2.0 meters. If a second object with one-half the mass is lifted vertically 2.0 meters, the potential energy gained by the second object will be
- A) 10. J B) 5.0 J C) 2.5 J D) 20. J
- 9) A spring of negligible mass with a spring constant of 200 newtons per meter is stretched 0.2 meter. How much potential energy is stored in the spring?
- A) 4 J B) 8 J C) 40 J D) 20 J
- 10) A person does 100 joules of work in pulling back the string of a bow. What will be the initial speed of a 0.5-kilogram arrow when it is fired from the bow?
- A) 50 m/s B) 20 m/s C) 200 m/s D) 400 m/s
- 11) What is the maximum distance that a 60.-watt motor may vertically lift a 90.-newton weight in 7.5 seconds?
- A) 2.3 m B) 5.0 m C) 1100 m D) 140 m