Name: _____

Quiz 2

Physics 105
16 September 2002

- 1. The distance from the Earth to the sun is 1.5×10^{11} m and the speed of light is 3×10^8 m/s. How many seconds does it take for light from the sun to reach the Earth?
  (a) 2×10^{-3} s
  (b) 2×10^3 s
  ⇒ **(c) 5×10^2 s**
  (d) 5×10^{-2} s
  (e) 8 s

- 2. According to Newtonian physics, an object with no forces acting on it must
  (a) fall.
  (b) eventually come to rest.
  (c) be at rest.
  ⇒ **(d) either be at rest or have constant velocity.**
  (e) be accelerated, with an unchanging acceleration.

- 3. Suppose you are on the moon and you drop a rock and a feather at the same time. You will find that
  ⇒ **(a) the two fall at the same rate, but slower than a rock would fall on Earth.**
  (b) the two fall at the same rate, which is the same as that on Earth.
  (c) the rock falls faster than the feather, although both fall slower than on Earth.
  (d) the rock falls faster than the feather, although both fall at the same rates as on Earth.
  (e) they don't fall—they remain suspended above the surface of the moon.

- 4. The force needed to maintain a body at constant speed in outer space (far from all outside influences) is equal to
  (a) the mass of the body.
  ⇒ **(b) zero.**
  (c) the weight of the body.
  (d) the force required to stop it.
  (e) none of these.