

**10.14. (a)** At  $x = 6$  m the particle has the most kinetic energy. The kinetic energy is the difference between the total energy (TE) and potential energy (PE) curves. At  $x = 3$  m the particle's speed is locally a maximum, but is not as fast as at  $x = 6$  m.

**(b)** The turning points for the particle with total energy (TE) shown are at  $x = 2$  m and  $x = 8$  m.

**(c)** The particle could remain at rest in stable equilibrium at  $x = 3$  m and  $x = 6$  m. The particle could also remain at rest in unstable equilibrium at  $x = 1$  m and  $x = 4$  m.