1. An object undergoes an acceleration given by, $a(t) = 4 - 2t$ At $t = 0$ the object has a position of $x_o = -10$ m and a velocity of $v_o = 8$ m/s.

   (a) What is the velocity function, $v(t)$?

   (b) What is its speed at $t = 5$ seconds?

   (c) What is the position function, $x(t)$?

   (d) How far from the origin is it at $t = 3$ seconds?

2. The figure below shows the x component of the velocity of a particle as a function of time. The particle starts at $x(0) = 8$ m.

   (a) Does the particle have a turning point? If so, when?

   (b) What is the position at 1 sec?

   (c) What is the position at 2 sec?

   (d) What is the position at 4 sec?

   (e) Sketch graphs for both the position and acceleration function.