LAST Name (as seen on ROSI): _____ Tutorial Number: _____

FIRST Name (as seen on ROSI):_____ Student Number:_____

MIE 100S - Quiz 1b: Jan 14, 2015: quiz duration = 20 minutes

At time t = 0, a particle is located at (x,y) = (5, 2) meters. Its velocity at all times is given by V_x = (3t - 12) m/s, and V_y = 7t m/s, where "t" is the time measured in seconds. Make sure you give the correct units in your answers; vectors must have the direction clearly specified with respect to the x-axis.

(a) Determine $\vec{r}$ at time t = 2 seconds

(b) Find the magnitude of the total acceleration at time t = 2 seconds.

(c) At time t = 0, what angle (expressed in radians) does the velocity make with respect to the x-axis?