

LAST Name (as seen on ROSI): \_\_\_\_\_ Tutorial Number: \_\_\_\_\_

FIRST Name (as seen on ROSI): \_\_\_\_\_ Student Number: \_\_\_\_\_

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

A particle's position is defined by  $x = \sin(3t)$  and  $y = 4x^3$     ( $x$ ,  $y$ , and  $t$  are in SI units)

- (a) What is the particle's velocity at  $t = 4\text{s}$ ?
- (b) What is the  $x$ -component of the acceleration at  $t = 7\text{s}$ ?