

Name: _____

Panther ID: _____

Worksheet week 14

Calculus I – Fall '14

To receive credit you MUST SHOW ALL YOUR WORK.

1. A particle is moving (on a straight line) with the given data. Find the position $s(t)$ of the particle at time t .

$$a(t) = 2 \cos t + \sin t, \quad v(0) = 1, \quad s(0) = 0.$$

2. Compute $\int \frac{\cos(3/x)}{x^2} dx$

$$\int \frac{\sec^2 x}{\sqrt{1 - \tan^2 x}} dx$$

3. A car braked with constant deceleration of 16ft/s^2 , producing skid marks measuring 200ft before coming to a stop. How fast was the car traveling when the brakes were applied?