

Quiz #11, 11/22
Math 156 (Calculus I), Fall 2023

Problem 1 is worth 4 points, and Problem 2 is worth 6 points, for a total of 10 points. Remember to *show your work* on all problems!

1. The velocity (in meters per second) at time t (in seconds) of a car moving along a 1-dimensional road is given by the function $v(t)$. Write down an expression, in terms of $v(t)$, for the distance (in meters) the car travels between time $t = 2$ seconds and time $t = 5$ seconds.

2. Compute the following indefinite integrals by using the u -substitution technique:
 - (a) $\int x \cdot \cos(x^2) \, dx$
 - (b) $\int x^2 \cdot e^{x^3+2} \, dx$
 - (c) $\int \sqrt{5x+3} \, dx$