

Sixth Quiz for Math 31

Name: _____

1. (25 points) For a third degree polynomial $p(x)$ we have that $p(0) = -2$, $p'(0) = 3$, $p''(0) = 5$, and $p'''(x) = 12$. Find $p(x)$.

2. (25 points) Find $\int x(x-2)^8 dx$

3. A particle moves along a straight line with velocity $v(t) = 3t - 2$.
- (a) (25 points) Find the displacement of the particle for the time interval $1 \leq t \leq 3$.

- (b) (25 points) Find the total distance covered by the particle in the time interval $1 \leq t \leq 3$.