

MATH 211- Quiz 3 - Fall 2001- NAME:

Show work to get credit.

1. If $y = x^3 + 2x$ and $dx/dt = 5$, then find dy/dt when $x = 2$.
2. Two cars start moving from the same point. One travels south at $60mi/h$ and the other travels west at $25mi/h$. At what rate is the distance between the cars increasing two hours later?
3. Find the linear approximation of the function $f(x) = \sqrt{1-x}$ at $a = 0$ and use it to approximate the number $\sqrt{0.9999}$.