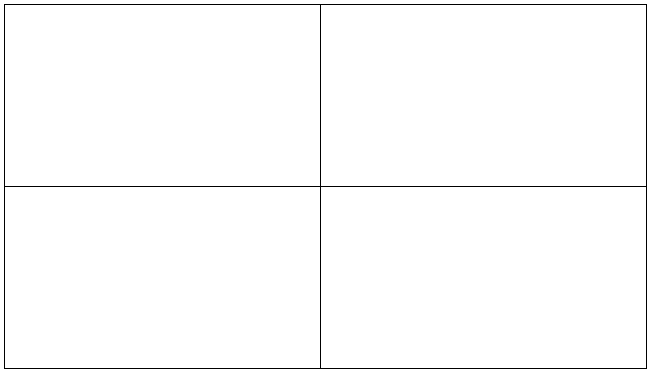
Math2210 Quiz 1 (Sections 10.4, 11.1) Summer, 2012 Dylan Zwick

Name _____ Date _____

Instructions: Please show all of your work as partial credit will be given where appropriate, **and** there may be no credit given for problems where there is no work shown. All answers should be completely simplified, unless otherwise stated.

1. For $x=4-t$ and $y=\sqrt{t}$ such that $0\leq t\leq 4$, eliminate the parameter and graph the curve. Indicate if the curve is simple and/or closed.



Equation _____

Simple: T or F (circle one)

Closed: T or F (circle one)

2. Find the distance between the points (0, 1, 2) and (4, 3, 6).

distance = _____

3. Find $\frac{dy}{dx}$ and $\frac{d^2y}{dx^2}$ (without eliminating the parameter) for $x=3t^2+2t+1$ and $y=2t^2+4t+7$.

$\frac{dy}{dx}$ = _____

$\frac{d^2y}{dx^2}$ = _____

4. Find the equation of the sphere that has the line segment joining the two points in question #2 as a diameter.

Center of sphere: _____

Equation of sphere: _____