

Math2210 Quiz 4 (Sections 14.4, 14.5, 14.6, 14.7, 14.8, 14.9) Summer, 2008
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. Find a parametric equation for the line perpendicular to both of the vectors $\mathbf{a} = 4\mathbf{i} - 2\mathbf{j} + 1\mathbf{k}$ and $\mathbf{b} = -2\mathbf{i} - \mathbf{k}$ and that passes through the origin $(0,0,0)$.

Answer 1: _____

2. Find the parametric equations of the line through $(4, 1, 3)$ and $(6, -1, 2)$.

Answer 2: _____

3. Name the type of quadric surface given by $4x^2 + 25y^2 - 100z = 0$.

Type of surface: _____

4. Change $(5, \frac{\pi}{3}, -1)$ from cylindrical coordinates to Cartesian.

Answer : _____

Extra Credit: (5 pts) Change $(2\sqrt{3}, 6, -4)$ from Cartesian coordinates to spherical.

Extra Credit Answer: _____