Name:
May 21, 2015
MAC 2313.8326
Cyr

Quiz 2
You must show all work to receive full credit!!

Problem 1. (2 pts) If $\mathbf{v} \times \mathbf{w} = \langle 4, -2, 5 \rangle$, find $\mathbf{w} \times (\mathbf{v} + \mathbf{w})$.

Problem 2. (4 pts) Find the scalar equation of the plane containing the vectors $\langle 1, -5, 3 \rangle$ and $\langle 2, 7, -4 \rangle$ and passing through the point $(-2, 8, 3)$.

Problem 3. (4 pts) A quadric surface is given by the equation $z = \left(\frac{x}{4}\right)^2 + \left(\frac{y}{3}\right)^2$. Find the traces obtained by intersecting the surface with the planes $z = 1$, $y = 0$, and $x = 0$, and use this information to classify the quadric surface (what type is it?).