Quiz 6   Calculus 3   11/9/2007

Each problem is worth 5 points. Clear and complete justification is required for full credit.

Let $\mathbf{F}(x,y,z) = \dfrac{x}{x^2 + y^2 + z^2}\mathbf{i} + \dfrac{y}{x^2 + y^2 + z^2}\mathbf{j} + \dfrac{z}{x^2 + y^2 + z^2}\mathbf{k}$.

1. Find div $\mathbf{F}$.

2. Find curl $\mathbf{F}$.