Q.1: Find the surface area of portion of the paraboloid $3z = 2x^2 + 2y^2$ that is below the plane $z = 4$.

Q.2: Use the divergence theorem to evaluate $\iint_S (\vec{F} \cdot \vec{n}) \, dS$ where $\text{Div}(F) = \frac{1}{x^2 + y^2 + z^2}$ and $D$ the region bounded by $x^2 + y^2 + z^2 = 25$, $x^2 + y^2 + z^2 = 9$. 
Q.3: Use Stokes’s theorem to evaluate $\int_C \vec{F} \cdot d\vec{r}$, where $\vec{F} = 2z\hat{i} - 3x\hat{j} + 2y\hat{k}$ and $S$ that portion of paraboloid $z = 16 - x^2 - y^2$ for $z \geq 0$. 