Quiz 6 Practice

1. Use implicit differentiation to find $\frac{dy}{dx}$.
$$3x^3 + y^5 = e^y$$

2. Use implicit differentiation to find y'.
Find the equation of the tangent line at $(2, 1)$.
$$3xy - 2x - 2 = 0.$$

3. Helium is pumped into a spherical balloon at a constant rate of 4 cubic feet per second. How fast is the radius increasing after 1 minute. <u>Hint</u>: $V = \frac{4}{3}\pi r^3$