Questions

1. (2 marks) Use the Chain Rule to find $\frac{\partial z}{\partial s}$. $z = x^2y^3$, $x = s^2t$, $y = st^2$
2. (3 marks) Suppose $z = f(x, y)$ is differentiable everywhere. Assume that $f_x(2, 1) = 2$ and $f_y(2, 1) = 3$. Find $\frac{d}{dt}[f(t^2 + 3t + 2, -2t^2 + 1)]_{t=0}$