Quiz 4

1. For the functions below, find the partial derivatives with respect to <u>each</u> of the independent variables:

a). $w = ze^{2x-5y}$.

b). $z = x\sin(x^2 + 3y)$.

2. If
$$g(s,t) = f\left(e^{t-s}, e^{s-t}\right),$$
where f is a differentiable function, find:
$$\frac{\partial g}{\partial s} + \frac{\partial g}{\partial t}.$$

Hint: Don't panic because you don't know exactly what the partial derivatives of f look like - it works out.