Math 176 Quiz 8 Version A

1. Fill in the blanks in the following derivative rules:

$\frac{d}{dx}x^n =$	$\frac{d}{dx}e^x =$	$\frac{d}{dx}\ln x =$	

$$\frac{d}{dx}b^x = \frac{d}{dx}\log_b(x) = \frac{d}{dx$$

$$\frac{d}{dx}(f+g)(x) =$$

$$\frac{d}{dx}(fg)(x) = \boxed{}$$

$$\frac{d}{dx}(1/g)(x) =$$

$$\frac{d}{dx}(f/g)(x) =$$

$$\frac{d}{dx}(f \circ g)(x) =$$

$$\frac{d}{dx}(f^{-1})(x) =$$

2. Find the derivative $\frac{d}{dx}\ln(5+x^2e^x)$.