## Wait What's the Derivative? The Game!

For each of the following fill in the blank. Notice you should check your answers when you are done by taking the derivative of your answer!

Problem 1.  $\frac{d}{dx}\left(\dots\right) = 2x$ 

Problem 2. 
$$\frac{d}{dx}\left( \_\_\_ \right) = x^2$$

**Problem 3.** 
$$\frac{d}{dx}(---) = 2x^3 + 7$$

**Problem 4.** 
$$\frac{d}{dx}\left( \_\_\_ \right) = e^x$$

**Problem 5.** 
$$\frac{d}{dx}\left( - \right) = \cos(x)$$

**Problem 6.** 
$$\frac{d}{dx}\left(\underline{\phantom{x}}\right) = \sin(2x-1)$$

**Problem 7.**  $\frac{d}{dx}\left( \underline{\phantom{x}} \right) = \sec^2(x)$ 

**Problem 8.**  $\frac{d}{dx}\left( \underline{\phantom{x}} \right) = \csc^2(x)$ 

Problem 9. 
$$\frac{d}{dx}\left( --- \right) = e^{2x+1}$$

Problem 10. 
$$\frac{d}{dx}(---) = \frac{1}{x}$$

**Problem 11.** 
$$\frac{d}{dx}(---) = \frac{1}{x+1}$$

**Problem 12.** 
$$\frac{d}{dx}\left( \underline{\qquad} \right) = \frac{\cos(x)}{\sin(x)} + 2$$

Problem 13. 
$$\frac{d}{dx}\left( - \right) = \frac{x}{x^2}$$

**Problem 14.**  $\frac{d}{dx}(---) = x\cos(x^2+1)$