

Name: \_\_\_\_\_

**Directions:** Differentiate the functions. You **do not** need to simplify your answer.

1.  $y = \sin(7x + \pi)$

2.  $z = \sqrt[3]{w^3 + 8}$

3.  $y = \sec^2(x)$

4.  $y = \sec(x^2)$

5.  $D_x [x e^{\tan(3x)+1}] =$

Name: \_\_\_\_\_

**Directions:** Differentiate the functions. You **do not** need to simplify your answer.

1.  $y = \sqrt{5x + 1}$

2.  $y = \cos(x^2)$

3.  $y = \cos^2(x^2)$

4.  $z = \tan\left(\frac{e^w}{w + 1}\right)$

5.  $y = e^{\tan(3x)+x} + x^2$

Name: \_\_\_\_\_

**Directions:** Differentiate the functions. You **do not** need to simplify your answer.

1.  $z = \sqrt{4w^2 + 16}$

2.  $y = e^{x^2-x}$

3.  $y = \sin(e^{x^2-x})$

4.  $y = (4x^5 \cos(x) + 1)^{10}$

5.  $D_x \left[ \frac{e^{\tan(x)}}{x} \right] =$