

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

**Directions:** Differentiate the following functions.

1.  $y = e^{x^3-2x}$

2.  $y = \sqrt{\cos(x)}$

3.  $y = \sin\left(\left(x^4 - x^3\right)^8\right)$

4.  $y = \left(\frac{x-1}{x+1}\right)^9$

5.  $y = 4w^8 - w + 1 + w^3 \sin(\pi w)$

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

**Directions:** Differentiate the following functions.

1.  $y = \sin^5(x)$

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

3.  $y = \sqrt{xe^{-x}}$

4.  $y = \left(x + \tan(x^5)\right)^9$

5.  $y = 4w^8 - w + 1 + w^3 \sin(\pi w)$

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

**Directions:** Differentiate the following functions.

1.  $y = \sec(-3x)$

2.  $y = 7e^{x^2-2x+4}$

3.  $y = \sqrt{x \sin(x)}$

4.  $y = \tan\left((x^6 + 4x^2)^7\right)$

5.  $y = 4w^8 - w + 1 + w^3 \sin(\pi w)$

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

**Directions:** Differentiate the following functions.

1.  $y = e^{\sin(x)}$

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

3.  $y = \sin(\tan(x^3 - 2x))$

4.  $y = \sqrt[3]{\frac{x-1}{x+1}}$

5.  $y = 4w^8 - w + 1 + w^3 \sin(\pi w)$