- 1. In this problem  $y = x^3 + \frac{1}{x}$ .
  - (a)  $\frac{dy}{dx} =$
  - (b)  $\frac{d^2y}{dx^2} =$
  - (c)  $\frac{d^3y}{dx^3} =$
- $2. D_x \Big[ \cos \left( e^x \right) \Big] =$

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

4.  $D_x \left[ \sec \left( x^5 + x \right) \right] =$ 

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$$3. \quad D_x \Big[ \cot \left( x^5 + x \right) \Big] =$$

$$4. D_x \left[ \sin \left( \frac{x^5 + 1}{5x} \right) \right] =$$