Name: _____ Sort #: _____

Worksheet 5

Arc Length & Surface Area MATH 2205, Fall 2018

1. Find the arc length of the curve $y = \dfrac{x^4}{8} + \dfrac{1}{4x^2}$ on the interval $[1, 2]$.

2. Find the arc length of the curve $y = \frac{1}{3}(x^2 + 2)^{3/2}$ on the interval $[0, 1]$

3. Find the surface area of the solid generated by the curve $y = \dfrac{x^2}{4}$ revolved around the y-axis on the interval $2 \leq x \leq 4$.

4. Find the surface area of the solid generated by the curve $y = \dfrac{x^4}{8} + \dfrac{1}{4x^2}$ revolved around the x-axis on the interval $[1, 2]$.