8.1 - Arc Length
Calculus II

1. **Set up but do not evaluate. an integral for the length of the curve.**

$x = 9sin(y), 0 \le y \le \frac{\pi}{2}$

2. **Find the exact length of the curve**

$y = \frac{2}{3}x^{\frac{3}{2}}, 0 \le x \le 4$

3. **Find the exact length of the curve.**

$x = e^y + \frac{1}{4}e^{-y}, 0 \le y \le 7$

4. Find the exact length of the curve.

$y = \frac{1}{4}x^2 - \frac{1}{2}\ln(x), 1 \le x \le 2$

5. Determine the length of:

$y = 7(6 + x)^{3/2}, 189 \le y \le 875$