

7.4 Arc Length and Surfaces of Revolution

Name:

Date: July 9, 2015

P 8. Find the arc length of the graph of

$$y = \frac{x^4}{8} + \frac{1}{4x^2}$$

on $[1, 3]$.

P 12. Find the arc length of the graph of

$$y = \ln(\cos x)$$

on $[0, \pi/3]$.

P 14. Find the arc length of the graph of

$$y = \ln \left(\frac{e^x + 1}{e^x - 1} \right)$$

on $[\ln 2, \ln 3]$.

P 16. Find the arc length of the graph of

$$x = \frac{1}{3}\sqrt{y}(y - 3)$$

for $1 \leq y \leq 4$.

P 44. Find the area of the surface of revolution obtained by revolving the curve $y = 1 - x^2/4$, $0 \leq x \leq 2$, about the y -axis.

P 46. Find the area of the surface of revolution obtained by revolving the curve $y = x/2 + 3$, $1 \leq x \leq 5$, about the y -axis.