

CALCULUS 2 - FALL 2017 - HOMEWORK 4

Find the following curve lengths:

1)  $y = \ln(\cos x)$  from  $x = 0$  to  $x = \pi/3$

2)  $y = 3 + \frac{1}{2} \cosh 2x$  from  $x = 0$  to  $x = 1$

3)  $y = 1 - e^{-x}$  from  $x = 0$  to  $x = 2$

Find the exact area of the surfaces of revolution about the x-axis:

4)  $y = \sqrt{1 - e^x}$  from  $x = 0$  to  $x = 1$

5)  $y = \sin \pi x$  from  $x = 0$  to  $x = 1$

6)  $y = \frac{1}{x}$  from  $x = 1$  to  $x = \infty$