

MEMORIAL UNIVERSITY OF NEWFOUNDLAND

DEPARTMENT OF MATHEMATICS AND STATISTICS

AREA BETWEEN CURVES

Math 1001 Worksheet

FALL 2019

For practice only. Not to be submitted.

1. Consider the region bounded by the curves $y = \sqrt{2x + 4}$ and $y = x + 2$.
 - (a) Find the area of the region by integrating with respect to x .
 - (b) Find the area of the region by integrating with respect to y .
2. Find the area of the region bounded by the given curves.
 - (a) $y = \frac{1}{x^2}$ and $y = 2$, on $[1, 2]$
 - (b) $y = x^2 + 3x$ and $y = x + 3$
 - (c) $y = 2x^2$ and $y = x^4 + 1$
 - (d) $y = x^2 + 2$ and $y = \frac{1}{2}x^2 - 2$ on the interval $[-3, 3]$
 - (e) $x = y^2 + 1$ and $x = y^4 - 2y^2 - 3$