

## Math 21B-B - Homework Set 5

### Section 6.1:

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11. Problem 44 on page 372 .
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### Section 6.2

1. Problem 1 on page 379.
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8. Problem 48 on page 381.

### Section 6.3

1. Find the length of the curve  $y = \frac{1}{3}(x^2 + 2)^{3/2}$  from  $x = 0$  to  $x = 3$ .
2. Find the length of the curve  $x = \frac{y^3}{6} + \frac{1}{2y}$  from  $y = 2$  to  $y = 3$ .
3. Find the length of the curve  $x = \int_0^y \sqrt{\sec^4 t - 1} dt$  for  $-\frac{\pi}{4} \leq y \leq \frac{\pi}{4}$ .