MATH 122: Calculus II
Some Hints and Answers for Assignment 4
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Exercise 1: Answer is -18

Exercises 13:
Method I: Mutliply out the integrand and then integrate term by term
Method II: Try substitution: $u = 2x + 3$

Exercise 37: Derivative of $\tan x$ is $\sec^2 x$. Consider what happens at $x = \pi/2$.

Exercise 45: Why is the answer 0?

Exercise 47: Theorem 4.35 may be useful.

Exercise 50: Definition 4.29 is helpful.

Exercise 55: Combine Fundamental Theorem of Calculus and the Chain Rule for differentiation.

Exercise 57: Use the result of Exercise 55 with $g(x) = x^4$ and $f(t) = \frac{t}{\sqrt{t^3+2}}$