

Math 1100 — Calculus, Quiz #10A — 2010-01-18

1. Compute the general antiderivative of each of the following functions:

(20)

(a) $f(x) = x^5 + 1.$

Solution: $F(x) = \frac{1}{6}x^6 + x + C.$

□

(20)

(b) $g(x) = \sqrt{x+1}.$

Solution: $F(x) = \frac{2}{3}(x+1)^{3/2} + C.$

□

(20)

(c) $h(x) = \sqrt{x+1} + x^5 + 1 + \cos(x).$

Solution: $F(x) = \frac{1}{6}x^6 + x + \frac{2}{3}(x+1)^{3/2} + \sin(x) + C.$

□

(40)

2. Let f be the function shown below. Suppose F is an antiderivative of f , and $F(0) = 0$. Sketch the graph of F .

