

Name _____ Student number _____ Quiz section: _____

There are three problems in this quiz (the other one is on the back of this page), total of 20 points. Write legibly and show your work fully.

1 Find the most general antiderivative of the function

(a) (4 points) $f(x) = x^{1/3} + e^{-3x}$;

(b) (4 points) $g(x) = \sin x \cos x$.

2. (6 points) Find function f such that $f''(x) = -3(x+1)^{-2} + \cos x$ with $f(0) = 1$ and $f'(0) = 0$.

3 Evaluate $\int_0^5 (3 - x) dx$ by interpreting it in terms of areas.