Math 102: Calculus II Semester 111 Quiz 1

Name: …… **ID: ……** **Section: 07** **Serial: ……..**

Please show your work!

1) Evaluate the integral by interpreting it in terms of areas $\int_{-10}^{0} |\, x+5 \,|\, dx$.

2) Evaluate the integral $\int_{-1}^{1} f(x)\,dx$ where $f(x) = \begin{cases} 10^x & \text{if } -1 \le x \le 0 \\ 2 - x^2 & \text{if } 0 < x < 1 \end{cases}$.

3) Find the general indefinite integral $\int \frac{\cos^2 x}{\sin x \sin 2x}\,dx$.