

Calculus and Analytic Geometry I

Quiz 5.2

Due Thursday

Name _____

Show all work necessary for your answers.

1. Compute $\int_0^3 (2x + 3) dx$ by interpreting it as an area. [The area of a trapezoid is $A = \frac{1}{2}(b_1 + b_2)h$.]

2. Compute $\int_{-3}^3 (2x + 3) dx$ by interpreting the definite integral in terms of the areas above and below the x -axis.

3. Write $\int_0^3 (2x + 3) dx$ as a limit of Riemann Sums.

4. Write the following limit of Riemann Sums as a definite integral: $\lim_{n \rightarrow \infty} \sum_{i=1}^n \sqrt{25 - x^2} dx$ on $[0, 5]$.

5. What is the value of that definite integral in number 4, interpreting it as an area.