

Calculus Class Worksheet #5 Unit 11 _____

Approximate the following definite integral using each of the following approximation methods.

(a) S_L (Left Rectangular), (b) S_R (Right Rectangular), (c) S_M (Midpoint Rectangular), (d) S_T (Trapezoidal), and (e) S_S (Simpson's).

Show your complete solutions neatly organized. In every case, divide the interval $[a, b]$ into 6 sub-intervals.

$$\int_2^5 \sqrt{x^3 - 3} \, dx$$

(a) $S_L =$ _____

(b) $S_R =$ _____

(c) $S_M =$ _____

(d) $S_T =$ _____

(e) $S_S =$ _____