

Topic #22 (Math 31)

1. Goals (Section 5.2)
 - a. Limits of Reiman sums
 - b. Velocity and integration
2. Summation Formulas (Section 5.1, page 510, above example 5.2)
 - a. Sum 1 to n.
 - b. Sum of squares
 - c. Sum of powers of 3
3. Limits of sums
4. Example:
 - a. Do Reimann sum limit for definite integral of $x + 1$, from 0 to 2.
 - b. More complicated: 5.2, example 5.7
5. Properties of definite integral: Pages 537 - 538
6. Interpretation
 - a. Principle: Distance = velocity * time
 - b. Conclude: Distance traveled from time a to time b = $\int_a^b v(t) dt$