1. Find $\int \frac{x}{x^2-9}\,dx$ two ways. Neither of them should involve your calculator. For what it's worth, neither of them should involve integration by parts, either. (4 points)

2. An astute calculus student notes that her calculus professor spews forth $r(t) = 5e^{7t^2}$ words/minute, where t gives the number of hours from the beginning of class. Use MID(3) to estimate the total number of words that the professor spews in the course of a standard 90 minute calculus II course. (3 points)

3. Suppose that the exact value for the number of words the calculus professor in (2) spews is 1,706,082. What number of words would you expect to get if you used MID(12) to estimate the total? (No, you should not actually find MID(12).) (3 points)