

**Quiz 8      Calculus 1      4/11/2006**

Each problem is worth 5 points. Clear and complete justification is required for full credit.

1. Given the table of values below for the rate at which sediment is accumulating in a ditch  $t$  days after the beginning of the rainy season, find upper and lower approximations for the total amount of sediment which has accumulated after 3 days.

$t$ (days)	0	1	2	3	4	5
$r$ (inches/day)	0	4.2	4.5	0.7	-3.8	-4.8

2. Set up an expression in sigma notation, in the form of equation 3 from the book, for the value of

$$\int_0^3 (10 + 5x) dx.$$

3. Evaluate  $\int_4^8 5 dx$ .