

**SOC510 Homework #4** Due September 22 (Tue)

No late submission is accepted for this homework. Solution will be posted on Sep 22.

**Chapter 4. Scatterplot & Correlation**

A. Answer 1–8, using the following data.

work satisfaction( $x$ )	12	24	17	28	24	36	20
propensity to leave a job( $y$ )	44	36	25	23	32	17	24

1. draw a scatterplot
2.  $\bar{x}$ ,  $\bar{y}$
3.  $s_x$ ,  $s_y$
4.  $SS(x)$ ,  $SS(y)$ ,  $SS(xy)$
5. correlation coefficient  $r$
6. Interpret  $r$

B. People not only live longer today but also live longer independently, The May/June 1989 issue of *Public Health Reports* published an article titled “A Multistate Analysis of Active Life Expectancy.” Two of the variables studied were a person’s current age and the expected number of years remaining.

Age( $x$ )	65	67	69	71	73	75	77	79	81	83
Years Remaining ( $y$ )	16.5	15.1	13.7	12.4	11.2	10.1	9.0	8.4	7.1	6.4

1. draw a scatterplot
2.  $s_x$ ,  $s_y$
3.  $SS(x)$ ,  $SS(y)$ ,  $SS(xy)$
4. correlation coefficient  $r$

C. From the textbook,  
4.19; 4.21; 4.33 (b only); 4.35; 4.38