

**Problem Set 3 Answers**  
**[35 points total]**

**Chapter 15**

#8. For these data,  $SS_{\text{wife}} = 172$ ,  $SS_{\text{husband}} = 106$ , and  $SP = 122$ . The Pearson correlation is  $r = .904$ . with  $df = 6$ , the critical value for  $r$  is  $.707$ . Thus, there is a significant association between husbands' and wives' attitudes.

**[15 POINTS]**

- #9. a. With  $n = 15$ ,  $r \geq .514$  to be significant ( $\alpha < .05$ , two tailed). **[1 POINT]**  
b. With  $n = 30$ ,  $r \geq .361$  to be significant ( $\alpha < .05$ , two tailed). **[1 POINT]**  
c. With  $n = 92$ ,  $r \geq .205$  to be significant ( $\alpha < .05$ , two tailed). **[1 POINT]**

- #10. a. significant (critical value is  $.468$ )  
b. not significant (critical value is  $.514$ )  
c. significant (critical value is  $.361$ )  
d. not significant (critical value is  $.396$ )

**[2 POINTS EACH; total of 8]**

#22. a.  $M_x = 5$ ,  $M_y = 6$ ,  $SS_x = 10$ ,  $SP = 20$ , so the equation is  $\hat{Y} = 2X - 4$  **[4 POINTS]**

b.

<u>X</u>	<u><math>\hat{Y}</math></u>
7	10
5	6
6	8
3	2
4	4

**[1 POINT EACH; total of 5]**