Correlation and Regression 1 Problems

1. A researcher ranks the top 8 Major League Baseball (MLB) teams in terms of their 2005 finish in the regular season standings and their payroll. Is payroll positively correlated with success? Conduct a significance test at alpha = .05. This question corresponds with Power Practice Problem #7.

team rank	payroll rank
1	4
2	5
3	3
4	1
5	2
6	7
7	6
8	8

2. Conduct a phi coefficient to determine if gender is significantly related to depression in individuals with chronic pain. Calculate the effect size for this correlation. This question corresponds with Power Practice Problem #8.

	not depressed	**depressed**
males	8	3
females	6	6

3. A counseling psychologist is studying the relationship between number of promotions missed and job satisfaction. Data were collected from 15 workers from the local community. Use the data below to answer the following questions with alpha level = .05 for any significance testing:

1. Calculate the regression line.
2. If you have a promotions missed score of 2, what is your predicted job satisfaction score?
3. Calculate standard error of the estimate and interpret.
4. Determine if promotions missed accounts for a significant proportion of job satisfaction.
5. Test significance for regression coefficient.

This question corresponds with Power Practice Problem #9.

X (Promotions Missed)	Y (Job satisfaction)
0	15
2	3
2	12
1	11
3	5
1	8
2	15
0	13
3	2
3	4
4	2
1	8
1	10
1	12
2	8