

Practice Problems

Researchers examine the relationship between the hours students sleep each weeknight and the number of words they can recall in a stress and memory test. The results of the study appear below. Use this information to answer questions 1 through 6.

	Hours Nightly Sleep (X)	Number of Words Recalled (Y)
Mean	5.5	8.5
Standard Deviation	1.00	2.41
Correlation Coefficient $r = + .62$		

Predict the number of hours students slept from the following number of words recalled. Remember to compute the standard error of the estimate and include it in the final answer to each question.

1. 6.6 words

2. 8.0 words

3. 4.2 words

Predict the number of words recalled from the following hours of sleep. Remember to compute the standard error of the estimate and include it in the final answer to each question.

4. 6 hours

5. 8 hours

6. 4 hours

A psychologist examines the relationship between age and life satisfaction scores in a group of unemployed workers in a rural town. The results of the study appear below. Use this information to answer questions 7 through 10.

	Age (X)	Life Satisfaction Score (Y)
Mean	39.8	63.3
Standard Deviation	9	12
Correlation Coefficient $r = + .64$		

7. What is the regression equation for predicting the life satisfaction score from age?

8. Predict the life satisfaction score of an unemployed person, age 50, in this town. Remember to include the standard error of the estimate in your final answer.

9. Predict the life satisfaction score of an unemployed person, age 30, in this town. Remember to include the standard error of the estimate in your final answer.

10. Predict the life satisfaction score for an unemployed person, age 60, in this town. Remember to include the standard error of the estimate in your final answer.