

## Predicting the VD Rate Version 2

Your calculator or spreadsheet can perform a linear regression for each of the following data sets. At this point, you should know how to enter the data into the calculator or computer, construct the scatterplots, and obtain the least squares lines that will describe the VD rates as functions of time. You will need to find one regression equation for Spartanburg County, and one for South Carolina.

Cases of Major Venereal Disease per 100,000 residents  
for Spartanburg County, and for South Carolina

YEAR	1981	1982	1983	1984	1985	1986	1988	1990
Rate of VD (Sptbg. Co.)	198	347	289	295	412	486	353	485
Rate of VD (S. Carolina)	750	746	661	653	637	564	437	463

Once you have constructed the scatterplots, examine the data and note any trends that you see.

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When you have found the regression equations, fill in the information below.

Record the slopes: \_\_\_\_\_ the y-intercepts: \_\_\_\_\_ (Spartanburg)  
 \_\_\_\_\_ (S. Carolina)

Interpret all four of these values in context (in English):

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Write the equations of the lines:  $y =$  \_\_\_\_\_ . (Spartanburg)

$y =$  \_\_\_\_\_ . (S. Carolina)

Next, graph the regression lines on the scatterplots. How well do the lines fit the data?

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