



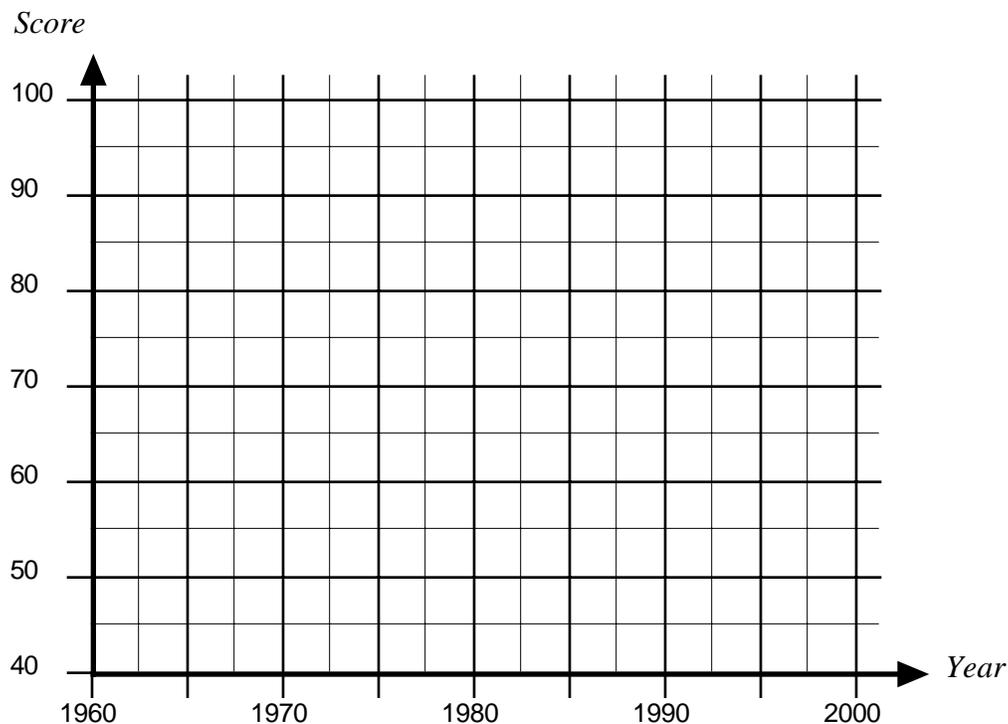
## In Class Exercises (ICE) - 10/11/00

Many food and wine magazines rank the quality of wine on a scale of 1 to 100, 100 being the finest. A developing California vineyard kept track of the some of the scores that its Chardonnay wines received, and these scores are listed in Table 1 below.

Vintage	1977	1982	1983	1985	1990	1993
Score	72	78	82	90	85	90

Table 1: Scores for California chardonnay 1977-1993.

- Plot the data from Table 1 on a graph of score versus year. Use your plot to estimate the score that the 1980 vintage would have received.



- Find an equation relating vintage and score. What features of your graph suggest a form for the equation?

- ***Using your formula, what score would you predict for the vineyard's 1980 Chardonnay?***

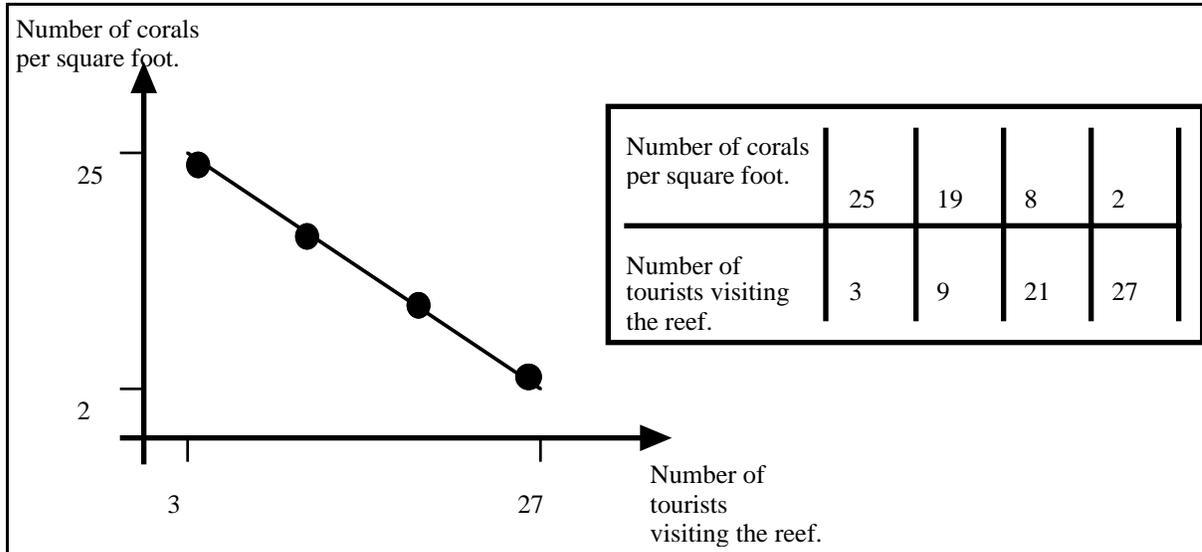
- ***The vineyard started to produce Chardonnay in 1969. According to your formula, what score did that vintage achieve? How reliable do you think this figure is, based on the appearance of your graph?***

- ***Vineyards that consistently produce wines which score 95 or above are regarded as elite. In a speech to wine growers, the owner of the vineyard confidently stated that by 1997, this vineyard would rank amongst the elite. Do you think these claims are valid or not ?***



## ***In Class Exercises (ICE) - 10/11/00***

***Marine biologists studying a coral reef in Hawaii have recorded data on the number of corals per square foot on the reef. In a report to the EPA, their findings were summarized into a table and a graph, as shown below.***



***• Do you think that the graph that the marine biologists have drawn is a good representation of the data or not?***

***• Does the appearance of the graph indicate the number of corals per square foot is a linear function of number of tourists? How could you use the table to check your conclusions?***

- ***Using the graph or the table, find a formula for the number of corals per square foot as a function of the number of tourists. See if you can use some of the capabilities of your calculator to check the formula you obtain.***

- ***What is the domain and range of the function that you have found? Be careful to state any assumptions that you make.***

- ***Is there a significant correlation between the number of corals and the number of tourists? Do you think that there is a causal relationship here? See if you can supply reasons for and against.***