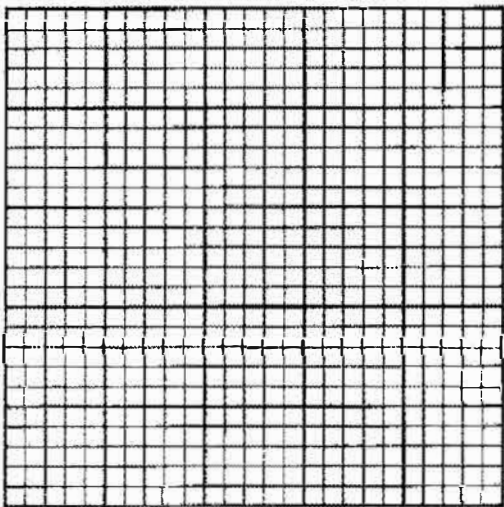


■ PROBLEMS

1. Following are three tables for making graphs. On the graphs, plot the economic relationships contained in each table. Be sure to label each axis of the graph and indicate the unit measurement and scale used on each axis.

a. Use the table at the top of the next page to graph national income on the horizontal axis and consumption expenditures on the vertical axis below; connect the seven points and label the curve "Consumption." The relationship between income and consumption

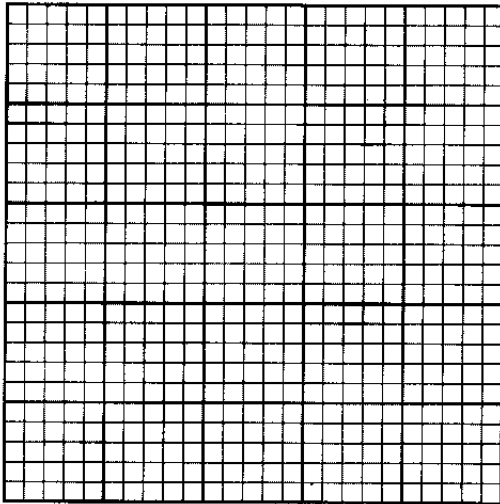
is (a direct, an inverse) _____ one and the consumption curve is (an up-, a down-) _____ sloping curve.



National income, billions of dollars	Consumption expenditures, billions of dollars
\$ 600	\$ 600
700	640
800	780
900	870
1000	960
1100	1050
1200	1140

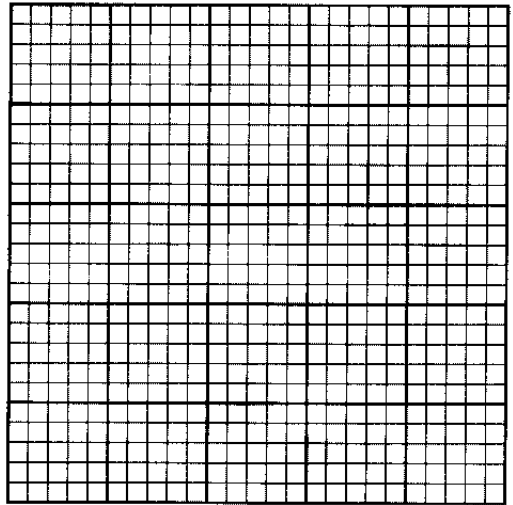
b. Use the next table to graph investment expenditures on the horizontal axis and the rate of interest on the vertical axis; connect the seven points and label the curve "Investment." The relationship between the rate of interest and investment expenditures is (a direct, an inverse) _____ one and the investment curve is (an up-, a down-) _____ sloping curve.

Rate of interest, %	Investment expenditures, billions of dollars
8	\$220
7	280
6	330
5	370
4	400
3	420
2	430



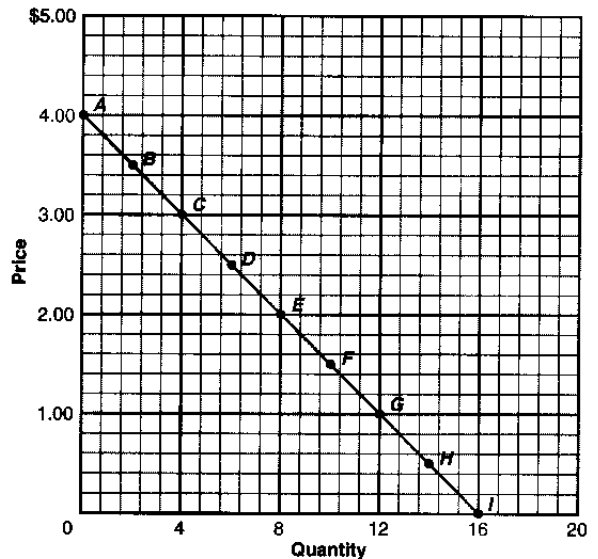
c. Use the next table to graph average salary on the horizontal axis and wine consumption on the vertical axis; connect the seven points.

Average salary, U.S. college professors	Annual per capita wine consumption in liters
\$52,000	11.5
53,000	11.6
54,000	11.7
55,000	11.8
56,000	11.9
57,000	22.0
58,000	22.1



- (1) The average salary of a college professor and wine consumption (are, are not) _____ *correlated*. The higher average salary (is, is not) _____ the *cause* of the greater consumption of wine.
- (2) The relationship between the two variables may be purely (coincidental, planned) _____; or, both the higher salaries and the greater consumption of wine may be the result of the higher (taxes, incomes) _____.

2. This question is based on the following graph.

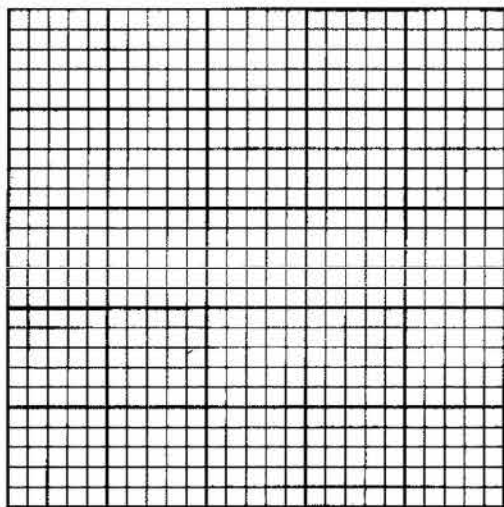


- a. Construct a table for points **A-I** from the data shown in the graph.
- b. According to economists, price is the (independent, dependent) _____ variable and quantity is the _____ variable.
- c. Write a linear equation that summarizes the data.

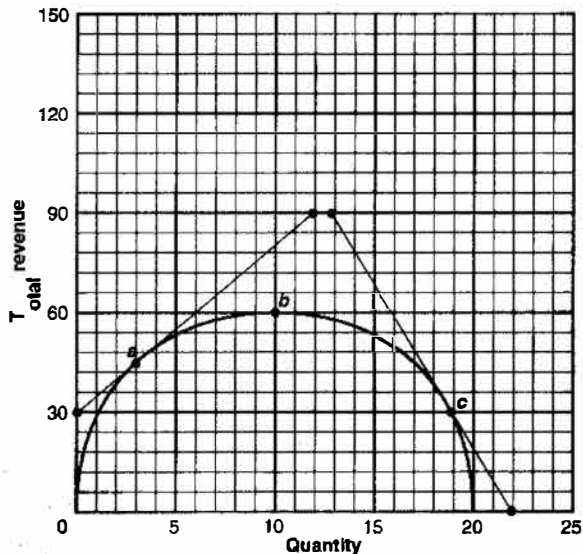
3. The following three sets of data each show the relationship between an independent variable and a dependent variable. For each set, the independent variable is in the left column and the dependent variable is in the right column.

(1)		(2)		(3)	
A	B	C	D	E	F
00	10	0	100	0	20
10	30	10	75	50	40
20	50	20	50	100	60
30	70	30	25	150	80
40	90	40	0	200	100

- a. Write an equation that summarizes the data for sets (1), (2), and (3).
- b. State whether each data set shows a positive or an inverse relationship between the two variables.
- c. Plot data sets 1 and 2 on the following graph. Use the same horizontal scale for both sets of independent variables and the same vertical scale for both sets of dependent variables.



0
4. This problem is based on the following graph.



- a. The slope of the straight line through point *a* is?
- b. The slope of the straight line through point *b* is?
- c. The slope of the straight line through point *c* is?