

Name _____

3-5B Lesson Master

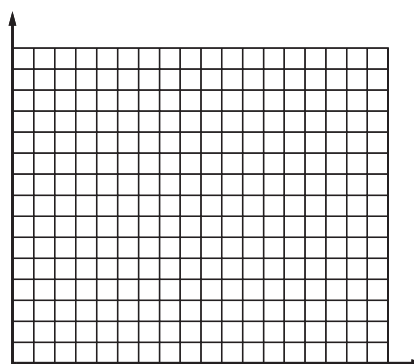
Questions on SPUR Objectives
See Student Edition pages 215–219 for objectives.

USES Objective J

1. The following data give the number of city council members in six cities with various populations.

Population	45,000	16,000	320,000	108,000	61,000	176,000
City Council Members	8	7	24	19	12	15

- a. Graph these data at the right. Use population in 10,000s for the independent variable. For example, 45,000 = 4.5 ten-thousands.
- b. Find an equation of the regression line for the data and graph it on the same axes at the right.



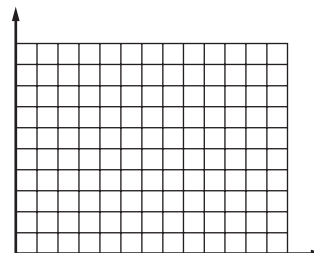
- c. Use your equation to predict the numbers of city council members in a city with a population of 250,000.

- d. What is the slope of the regression line? Explain what it means, as population increases by ten-thousands.

2. The table below lists pizza prices as a function of the diameter.

- a. Graph the data at the right.

Diameter	Price
6"	\$1.50
8"	\$3.50
12"	\$6.95
16"	\$9.95
18"	\$11.50



- b. Write an equation for the regression line and graph it above on the same axes from Part a.

Name _____

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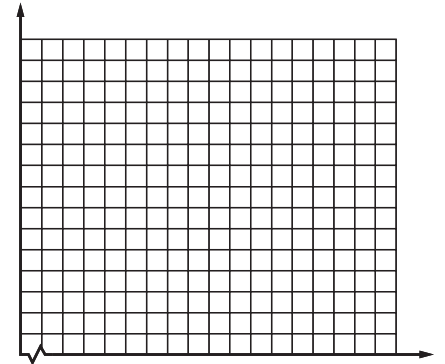
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- c. Use your equation to predict the price of a pizza with a 21" diameter. _____
- d. What is the slope of the regression line? Explain what it means in this situation.

3. The following data give the number of Frostee Treets sold and the high temperature on 10 different summer days.

Temperature °F	88	71	84	98	95	88	80	72	77	85
Frostee Treets Sold	2044	1099	1941	2708	2539	1886	1522	503	1493	1216

- a. Graph the data at the right.
- b. Write an equation for the regression line and graph it at the right.
- c. Use your equation to predict the number of Frostee Treets that would be sold on a 95°F day. How close is this value to the actual data?



- d. What does the slope in your equation mean in terms of this situation?

4. The data at the right estimate the number of people P who bought Silly Suzies from 2001 through 2008.

Year Since 2001	Number of Buyers (P)
0	25,399
1	26,008
2	29,424
3	34,095
4	36,564
5	39,539
6	42,909
7	45,405

- a. Write an equation for the regression line.
- b. According to your regression equation, how many Silly Suzies will be bought in the year 2010?
