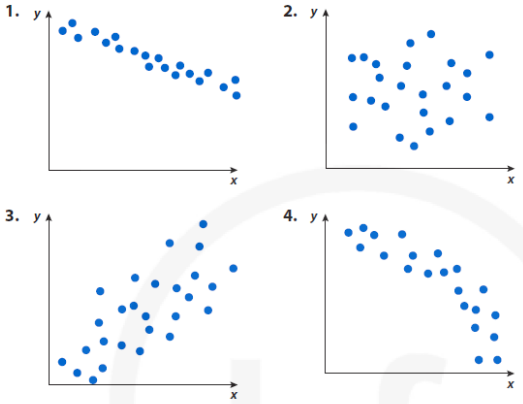
Pg. 223 #1-3, 6,7

For Exercises 1–4, examine the scatter plot and state whether it appears to contain a pattern. If it does, indicate whether it shows

a. a positive relationship, a negative relationship, or neither.

b. a strong linear relationship, a weak linear relationship, or a nonlinear relationship.



1a) negative
b) strong

2) No pattern

3a) positive
b) weak

For Exercises 6–7, do the following.

a. Identify the independent and dependent variables.

b. State whether you think the relationship between the two variables is positive or negative, or neither. Explain your answer.

6. For twenty highways during one month, average car speeds and the numbers of fatal accidents are recorded.

7. For eight weeks in the summer, the amount of rainfall and the average number of cars in a beach parking lot are recorded.

6a) IV = avg. car speed
DV = # of fatal accidents

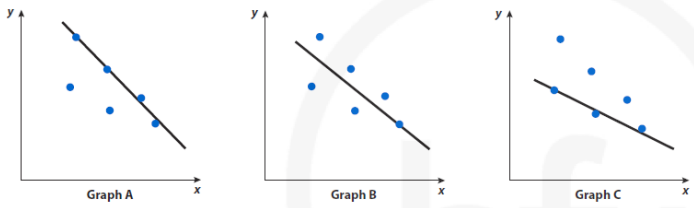
b) Positive Relationship → High speeds likely to cause more accidents

7a) IV = rainfall
DV = # of cars in beach parking lot

b) Negative Relationship → people are less likely to go to the beach when it rains

Pg. 227 #1-11

1. Which of the graphs below show(s) a line that appears to model the given data well? Explain your reasoning.



Graph B ...

For Exercises 2–6, use the following data that were collected from a group of adults.

Forearm Length (In.)	10.3	10.9	11.6	11.4	10.0	9.2	10.9	10.2	10.1	10.6	10.6
Height (In.)	69	72	74	71	63	64	70	69	64	64	69

2. Make a scatter plot of the data.
3. Draw a line that appears to model the trend in the data well. Find its equation.
4. Explain the meaning of the slope for this context.
5. Use your model to predict the height of a person with a forearm length of 9.5 inches.
6. Use your model to predict the forearm length of a person that is 68 inches tall.

2)

3) Sample answer:
$h = 5f + 15.5$

4) A person's whose forearm is 1 in longer than another persons will be about 5 in taller.

5) 63 in

6) 10.5 in

Pounds of Beads	Cost (dollars)
1	1.00
$1\frac{1}{4}$	1.50
2	2.10
$2\frac{1}{4}$	2.40
$2\frac{3}{4}$	3.05
3	3.50
$3\frac{3}{4}$	4.00

For Exercises 7–11, use the data in the table to the left, which shows the cost of different amounts of bulk bead purchases by a maker of jewelry for two months.

7. Make a scatter plot and draw a line that appears to fit the data well.
8. Find an equation for your line.
9. Explain the meaning of the slope. Does it make sense for this context?
10. Explain the meaning of the vertical intercept. Does it make sense for this context?
11. How much does your model predict that 5 pounds of beads would cost?
12. Semester grades for 8 students in a geography class are shown in the table below. Use a graphing calculator to make a scatter plot and draw a line that fits the data well.

Sample: $C = 1.12p - 0.02$

The cost is \$1.12/lb of beads

Yes, b/c it is the approx. cost of a lb. of beads

10) It is the cost to buy 0 lbs. of beads. Since it is so close to zero - yes!

11) \$5.58 or ≈ \$5.60