1. Identify the type of slope of the following graphs.   2. Find the domain and range of the graph.

positive

zero

Undefined

negative
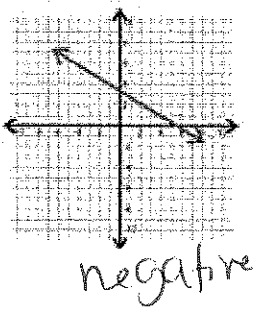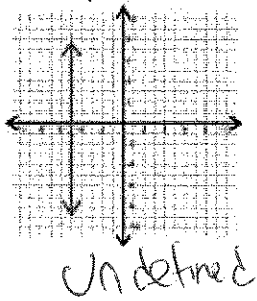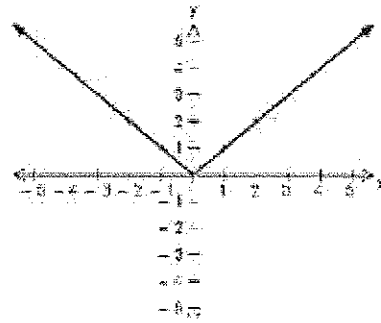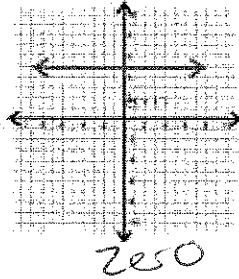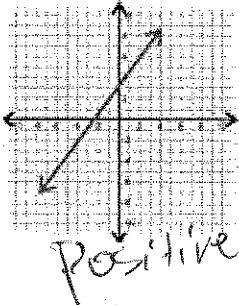
Domain: **Range:**

all real
numbers

$y \geq 0$

3&4. Choose which equation best represents the following graphs.

| A. y = 3x + 1 |
| B. y = -3x + 1 |
| C. y = 3x - 1 |
| D. y = -3x -1 |

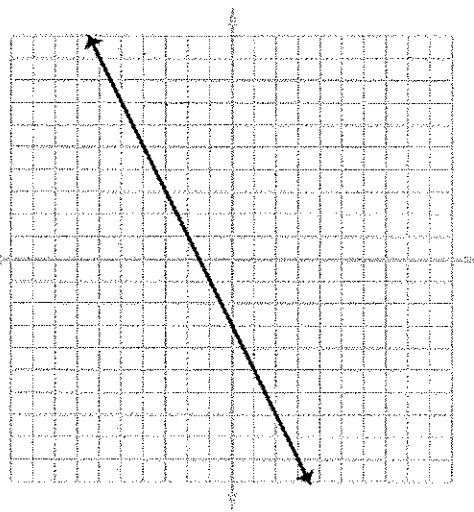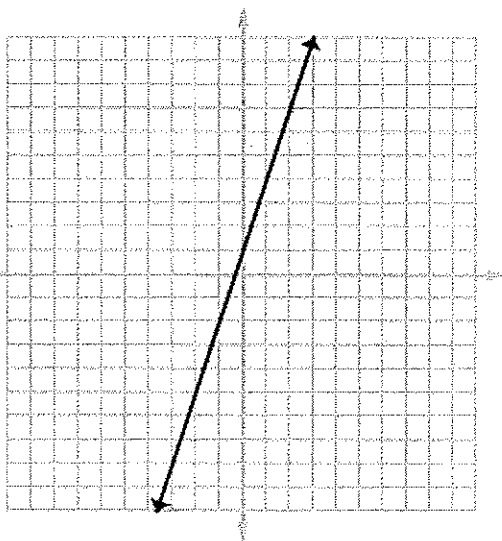| A.   y = 2x + 3 |
| B.   y = -2x + 3 |
| C.   y = -2x - 3 |
| D.   y = 2x - 3 |

Name: **Date:**

Unit 11_1, Day 1 Notes   **Period:**

Learning Targets
- ➤ I can tell if a scatterplot represents a line or a quadratic
- ➤ I can match scatterplots to equations of lines
- ➤ I can predict a value from a scatterplot
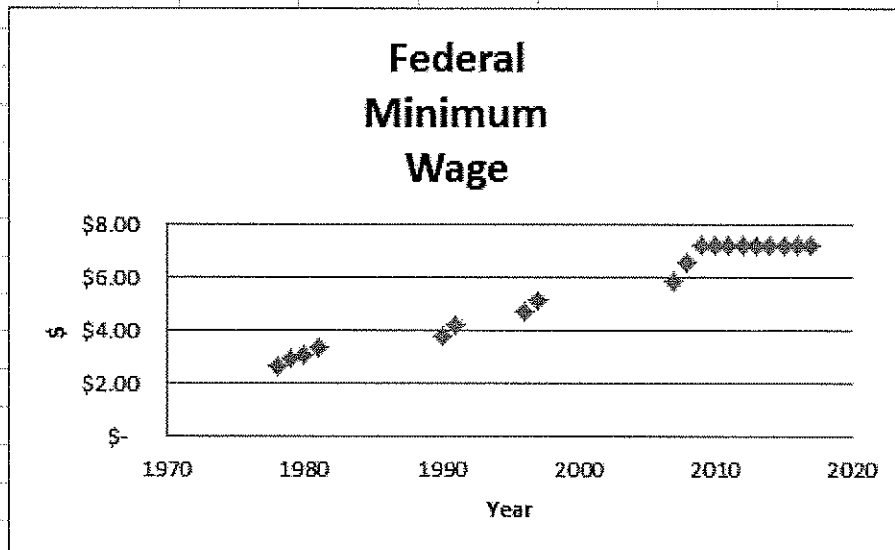
Vocabulary (or properties or formulas)
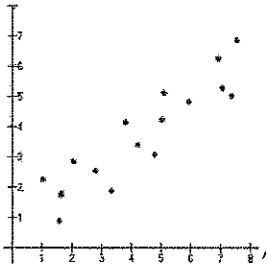
Scatterplot	Predict	Represents

What you can tell from the graph below?

Year	Federal Minimum Wage
1978	$ 2.65
1979	$ 2.90
1980	$ 3.10
1981	$ 3.35
1990	$ 3.80
1991	$ 4.25
1996	$ 4.75
1997	$ 5.15
2007	$ 5.85
2008	$ 6.55
2009	$ 7.25
2010	$ 7.25
2011	$ 7.25
2012	$ 7.25
2013	$ 7.25
2014	$ 7.25
2015	$ 7.25
2016	$ 7.25
2017	$ 7.25

Federal Minimum Wage

What is the CORRELATION of each scatterplot?

Circle one: ~~positive~~ (circled) negative none   **Circle one:** positive negative (none)   **Circle one:** positive (negative) none

If x=9, could you predict y?   8   If x=9 could you predict y?   no   If x=9 could you predict y?

Is the scatterplot LINEAR or QUADRATIC?
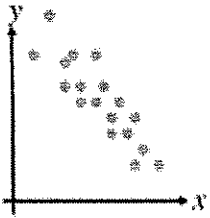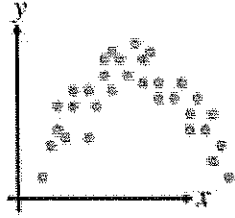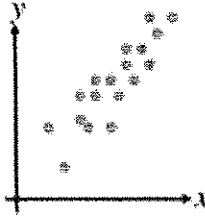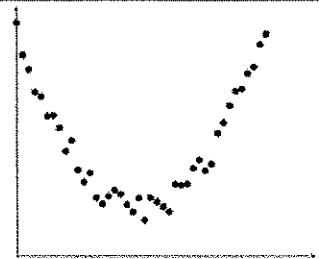
Circle one: (LINEAR) QUAD	Circle one: LINEAR (QUAD)	Circle one: (LINEAR) QUAD	Circle one: LINEAR (QUAD)

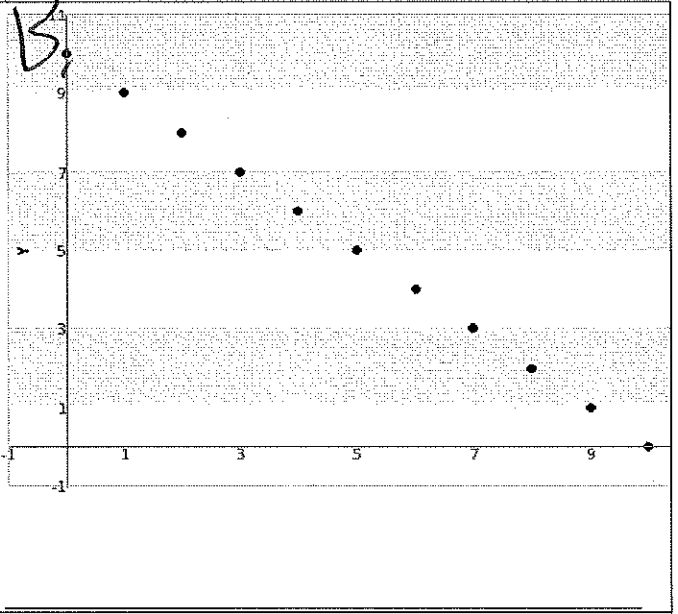**Which equation best RESPRESENTS each scatter plot below? Match the letter with the correct graph.**
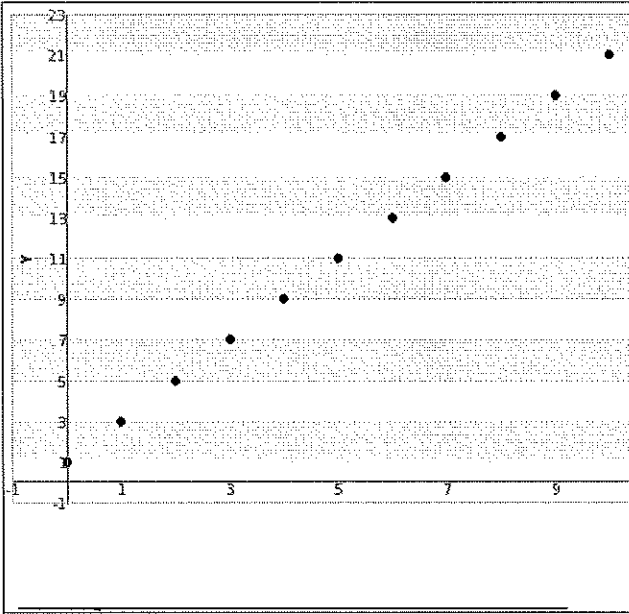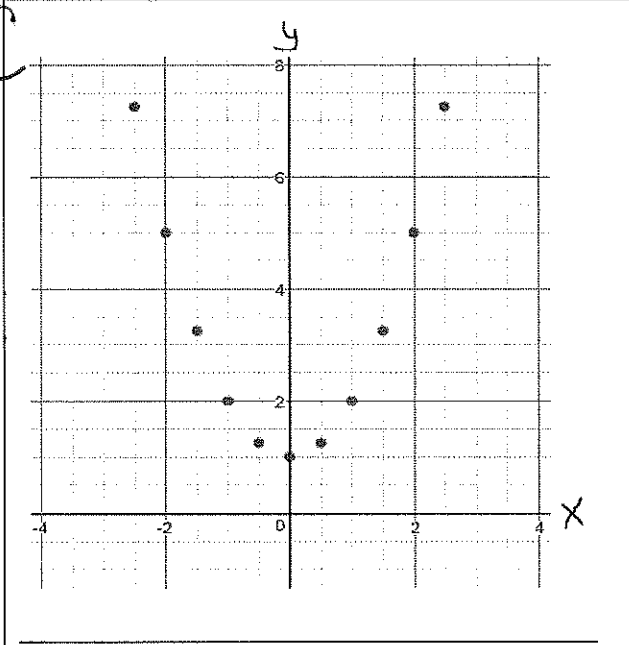
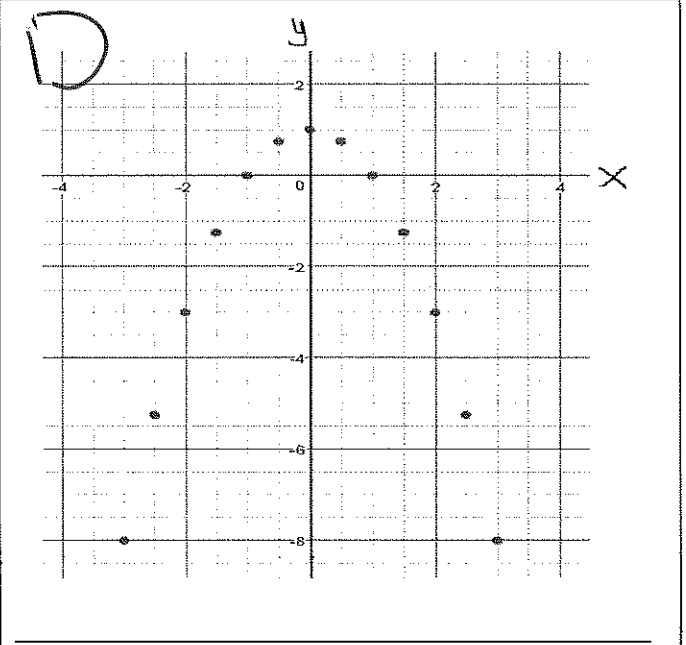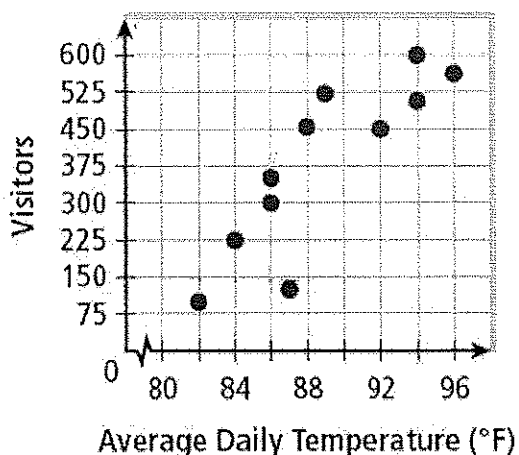| A. $y = 2x + 1$	B. $y = -2x + 10$	C. $y = x^2 + 1$	D. $y = -x^2 + 1$

A

B

C

D

Beach Visitors

Visitors vs. Average Daily Temperature (°F)

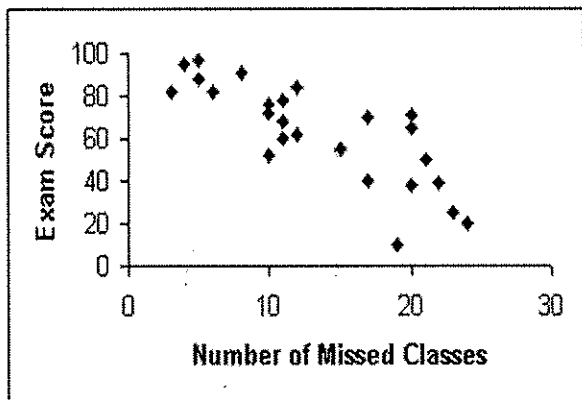**What is the correlation of this data?**

Positive

If the temperature is 98°, what is the best prediction for visitors?

675

If the number of visitors was 400, what is the best prediction for temperature?

87

Exam Score vs. Number of Missed Classes

What is the correlation of this data?
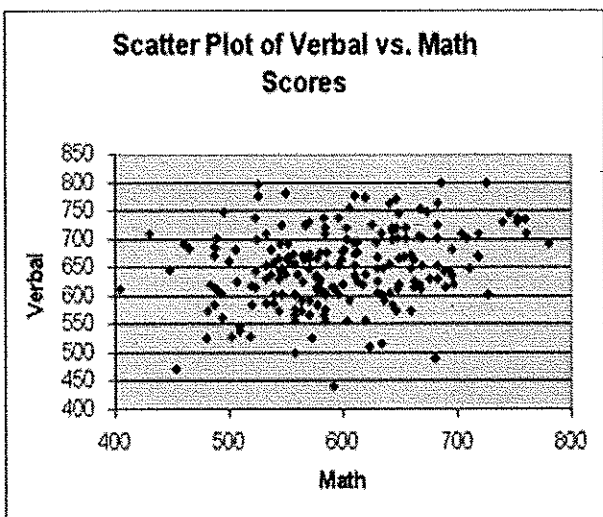
negative

If a student misses 15 classes, what is the best prediction for their exam score?

58

If a student's exam score was 99, what is the best prediction for the number of missed classes?

4

Scatter Plot of Verbal vs. Math Scores

Verbal vs. Math

What is the correlation of this data?

nothing

If the student's math score is 600, what is the best prediction for their verbal score?

no

If the student's verbal score is 700, what is the best prediction for their math score?

no

**Name:**   **Date:**

## Unit 11, Day 1 Activity   **Period:**

> ### Learning Targets
> ➤ I can tell if a scatterplot represents a line or a quadratic
> ➤ I can match scatterplots to equations of lines
> ➤ I can predict a value from a scatterplot

You will need to earn at least 20 points to successfully complete this activity. You must pick at least one question from each category. Write your answers on a separate sheet of paper.
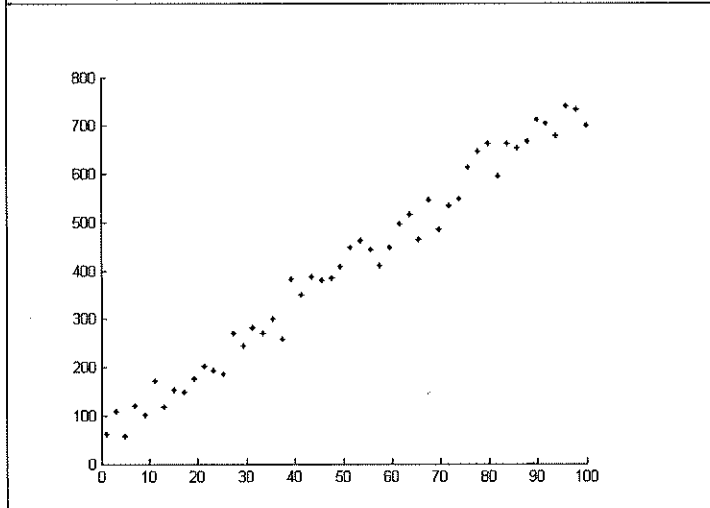
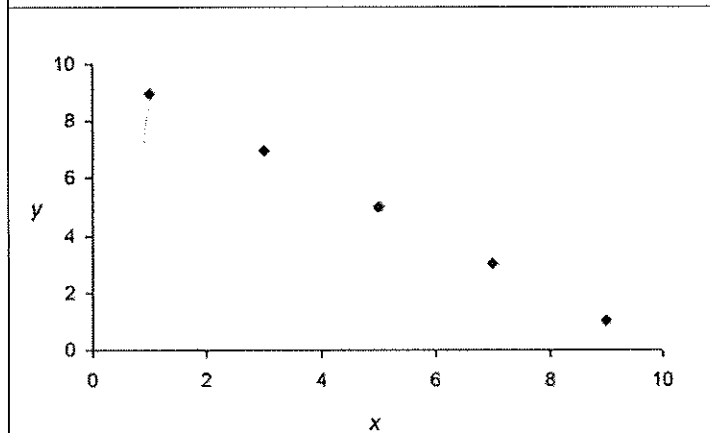### Category A (1 point each): Determine if the relation is linear or quadratic.

linear

linear

quadratic

quadratic

quadratic

linear
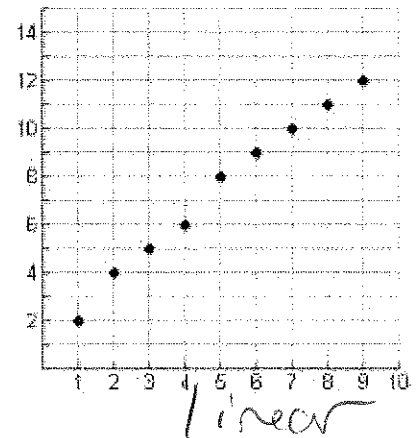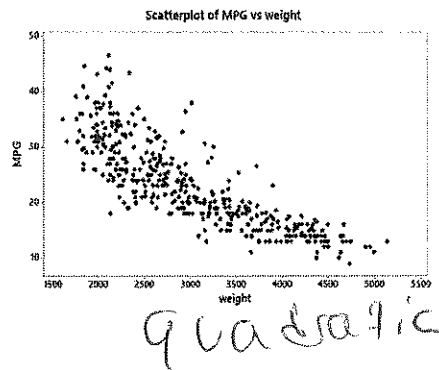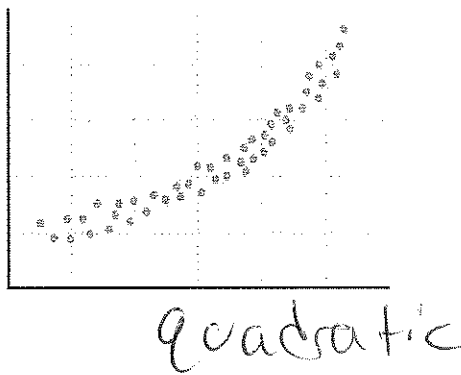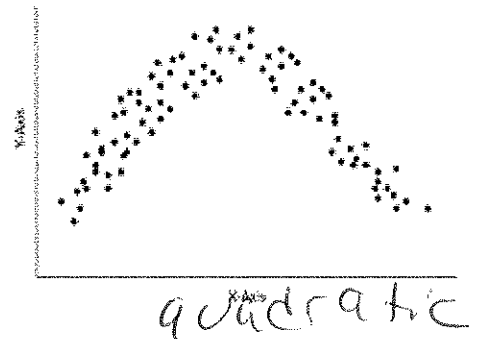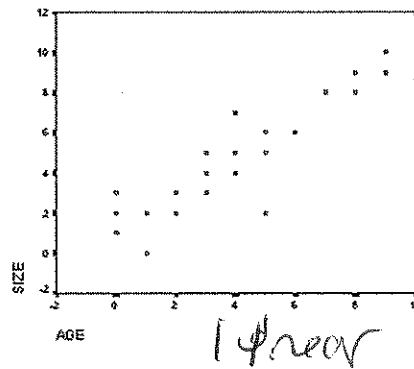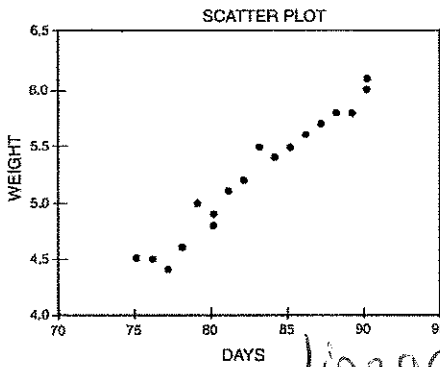
Category B (2 points each): Determine which line best matches the graph.
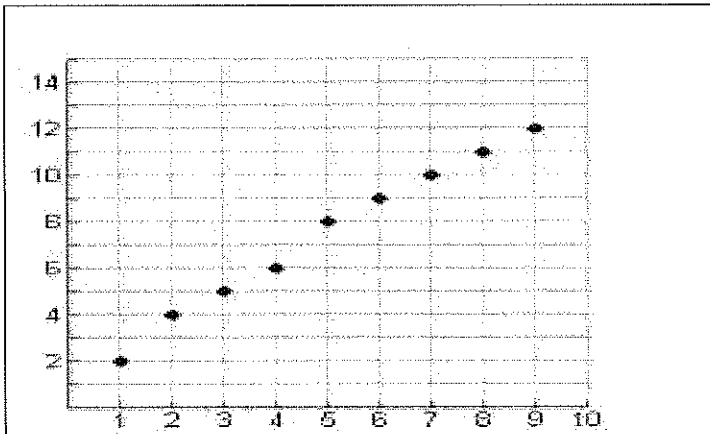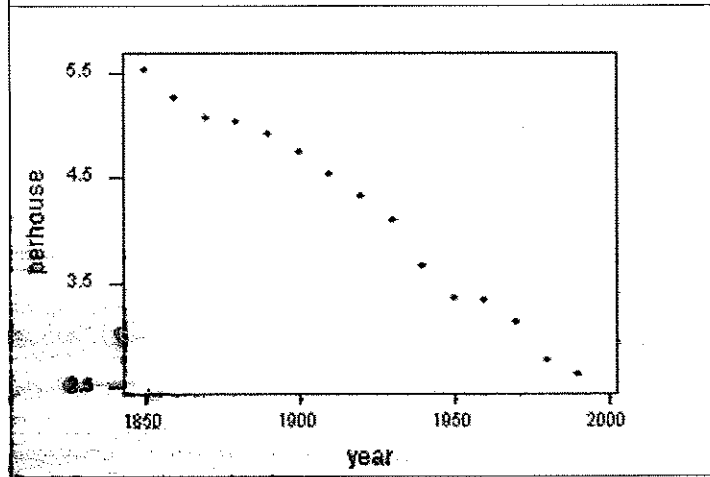

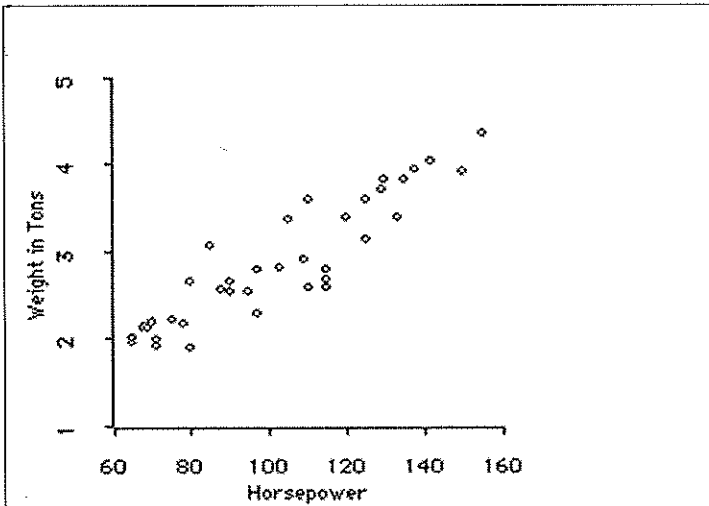|	
A.	y = 1.5x + .5
B.	y = -1.5x + .5
C.	y = -1.5x - .5
D.	y = 1.5x - .5

A.	y = x + 100
B.	y = -x + 100
C.	y = 10x + 50
D.	y = -10x + 50

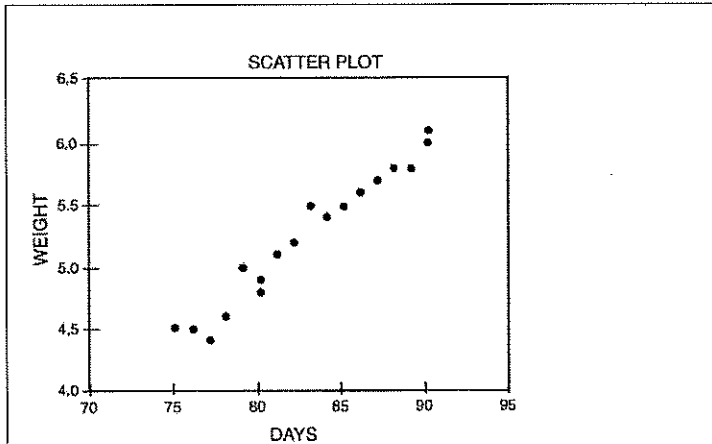|	
A.	y = -5x + 10
B.	y = -x + 10
C.	y = 5x + 10
D.	y = x + 10

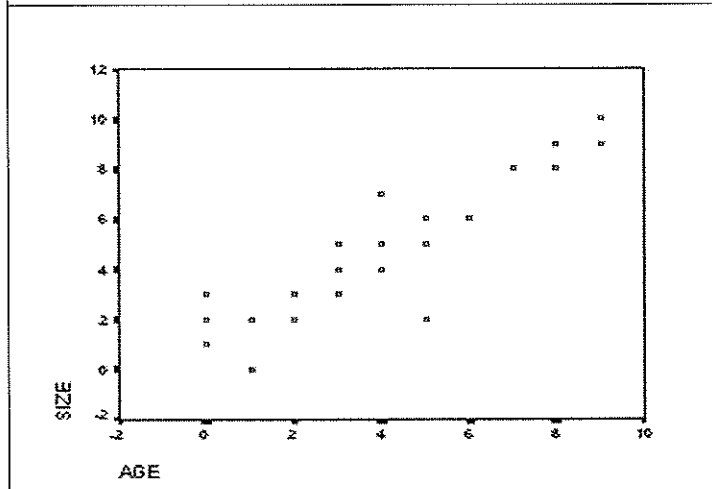|	
A.	y = -5x + 5
B.	y = -0.5x + 6
C.	y = 0.5 x + 6
D.	y = 5x + 5

Scatter plot: Weight in Tons vs Horsepower (x-axis: 60 80 100 120 140 160)

A. $y = -x + 1.8$
B. $y = -x - 1.8$
C. $y = x + 1.8$
D. $y = x - 1.8$

(C is circled)

Category C (3 points each): Find the best prediction using the data and the given value.

SCATTER PLOT (WEIGHT vs DAYS)

What is the best prediction for the weight at 72 days?

4.2

Scatter plot (SIZE vs AGE)

The size of the object is 12. What is the best prediction for the age?
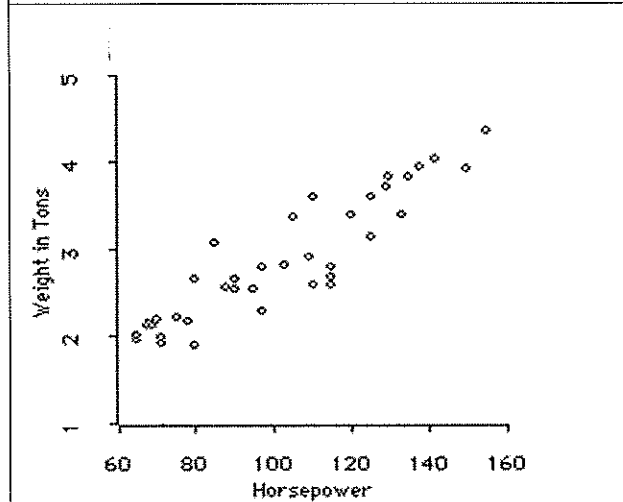
10

Scatterplot of MPG vs weight
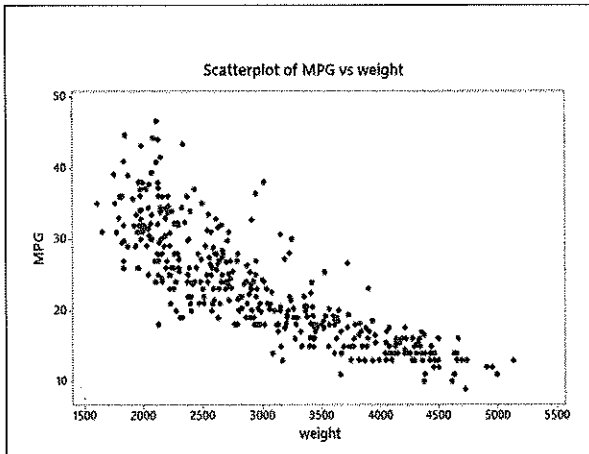
If a car weighs 1500 pounds, what is the best prediction for miles per gallon?

50
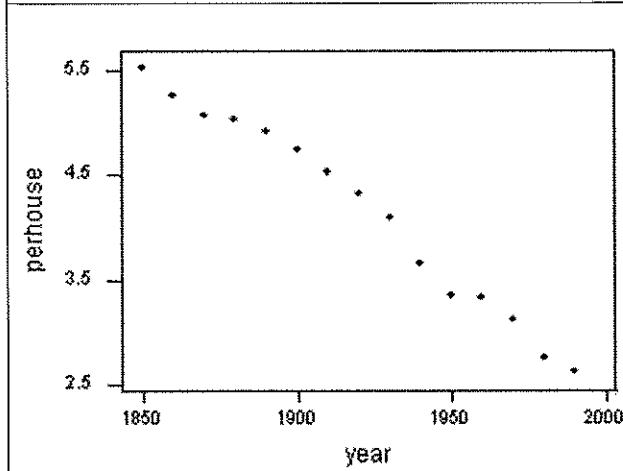
In 2000, what is the best prediction for the per house?

2.5

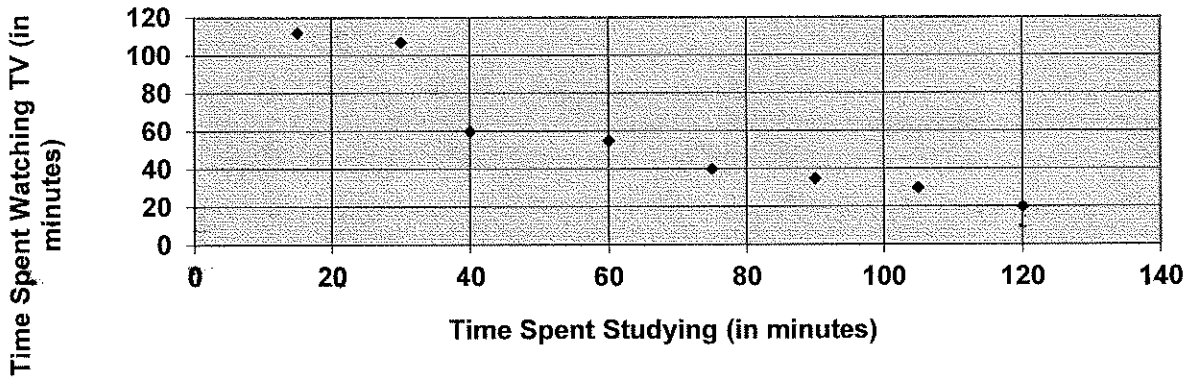**Mr. Ivey's car weighs 6 tons. What is the best prediction for the horsepower?**
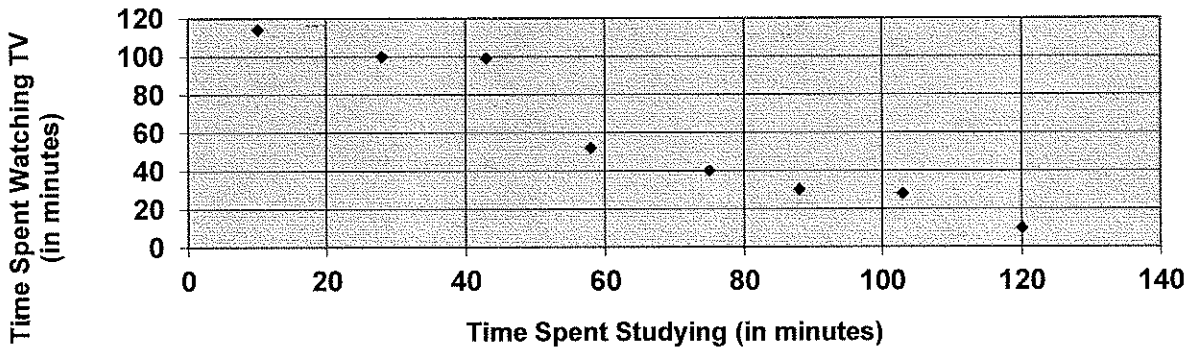
170

Name _____ Date _____ Block _____

Use the scatter plots below to answer the following questions.

Time Spent Watching TV compared to Time Spent Studying

Class A

Class B

1) Do you notice a **correlation** in the data for class A? _yes_ If so, what kind of **correlation**?
_____ negative

2) In both classes, there is a student who spent 120 minutes studying. Did the student in Class A or in Class B spend more time watching TV? _____ A _____

3) Make a **prediction**. If a student in Class B spent 50 minutes studying, about how much time did he/she probably spend watching TV? _____ 80 _____

4) Make a **prediction**. If a student in class A spent 80 minutes watching TV, about how much time did he/she probably spend studying? _____ 35 _____

5) Make an **inference**. If a student who watches a lot of TV likely to get higher grades or lower grades than a student who watches very little TV? Explain your answer.
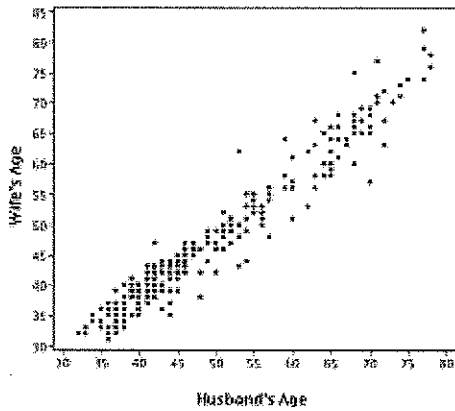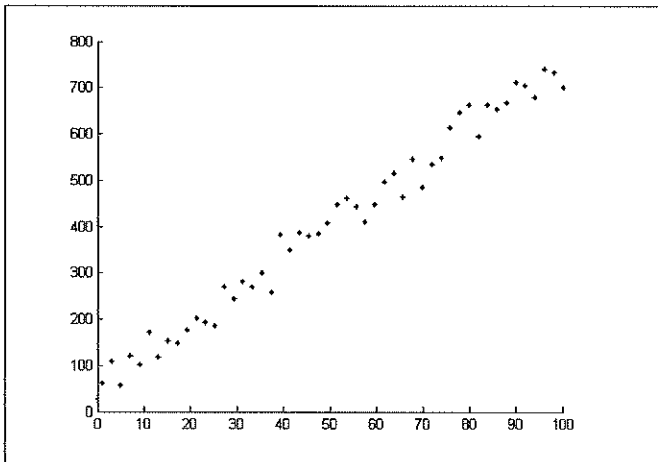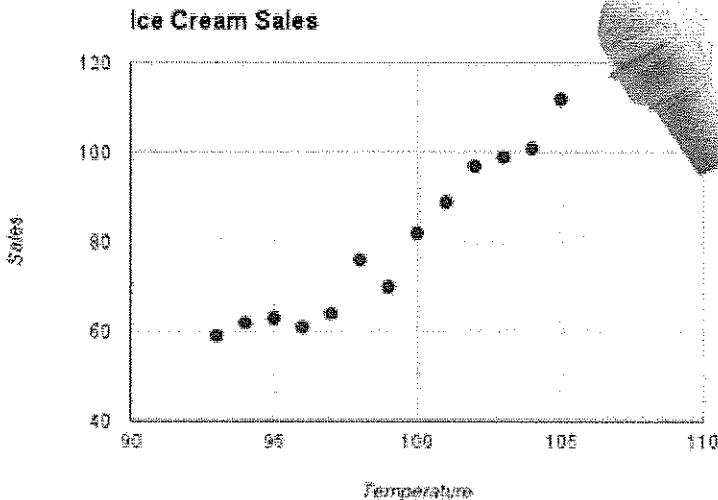lower

1. Does the scatterplot represent a line or a curve?

line

2. Which equation best matches the following scatterplot?

A.	y = -10x + 50
B.	y = 10x + 50
C.	y = 10x
D.	y = x + 50

3. Enrique owns an ice cream store and looks at the sales on a day where it was 90°. What is the best prediction for his sales?

45