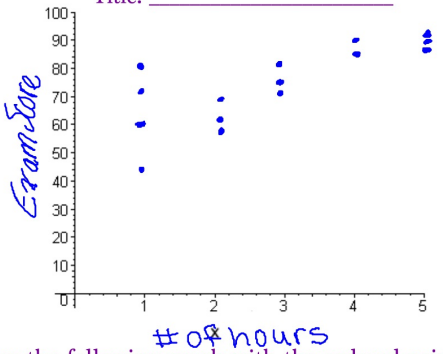
CW: 4.4.1- Scatterplots Name: _____

1. The table below gives data for 15 students on the number of hours they studied for their math test and their exam (test) score.

Student ID Number	Hours Spent Studying	Exam Score
A1	1	45
A2	3	82
A3	2	62
A4	2	70
A5	5	94
A6	3	75
A7	4	92
A8	1	73
A9	4	88
A10	5	85
A11	1	60
A12	5	90
A13	3	70
A14	2	57
A15	1	80

Title: _____



a. Student A1 can be represented on the following graph with the ordered pair (1, 45). What was this student's exam score? 45 How long did the student study? 1

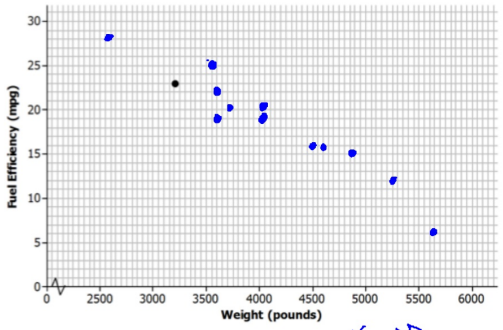
b. Add the points corresponding to the other 14 students to the scatterplot.

c. Do you notice a pattern in the scatterplot? What does this imply about the relationship between the number of hours studied (x) and the student's exam score? the more you study, the higher your score.

2. The table below shows the weight and fuel efficiency of 13 different models of cars produced by Chevrolet in 2009.

Model	Weight (pounds)	Fuel Efficiency (mpg)
1	3,200	23
2	2,550	28
3	4,050	19
4	4,050	20
5	3,750	20
6	3,550	22
7	3,550	19
8	3,500	25
9	4,600	16
10	5,250	12
11	5,600	16
12	4,500	16
13	4,800	15

Title: _____



a. Model 1 is repesented on the graph by the ordered pair (3200,23). What is the weight of the car? 3200 lbs What is the fuel efficiency? 23mpg

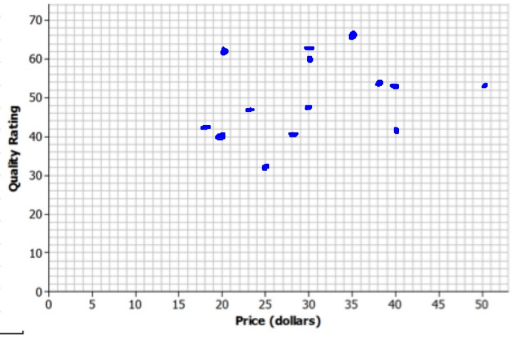
b. Add the points corresponding to the other 12 models to the scatterplot.

c. Do you notice a pattern in the scatterplot? What does this imply about the relationship between the weight of the car (x) and its fuel efficiency (y)? The heavier the car, the lower the fuel efficiency is.

3. The table below shows the price and quality rating for 15 different brands of bike helmets.

Helmet	Price (dollars)	Quality Rating
A	35	65
B	20	61
C	30	60
D	40	55
E	50	54
F	23	47
G	30	47
H	18	43
I	40	42
J	28	41
K	20	40
L	25	32
M	30	63
N	30	63
O	40	53

Title: _____



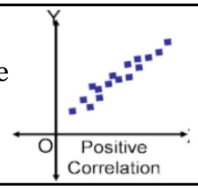
a. Helmet A is represented on the graph by the ordered pair (35,65). What is the quality rating of the helmet? 65 What is the price? 35

b. Add the points corresponding to the other 14 helmets to the scatterplot.

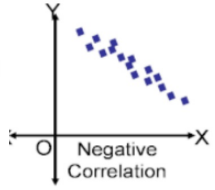
c. Do you notice a pattern in the scatterplot? What does this imply about the relationship between the price of the helmet (x) and its quality rating (y)? No pattern - the price has nothing to do with the quality

Scatterplot- A graph of pairs of numbers that represent real-life situations. It is a way to analyze the relationship between two quantities.

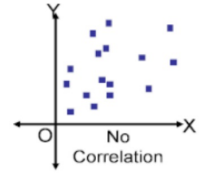
Positive correlation- A relationship between two variables where if one variable increases, the other also increases.



Negative correlation- A relationship between two variables where if one variable increases, the other decreases.



No correlation - No correlation means there is no relationship between two variables.



Identify the data sets as having a positive, negative or no correlation.

1. Amount of time spent reading and reading level. positin

2. Hair length versus height of 150 women. NONE

3. Distance driven versus gas left in the tank of the car. Negative

4. Distance walked in a pair of shoes versus the thickness of the sole of the shoes. Negative

5. Temperature versus number of ice cream cones sold. Positive