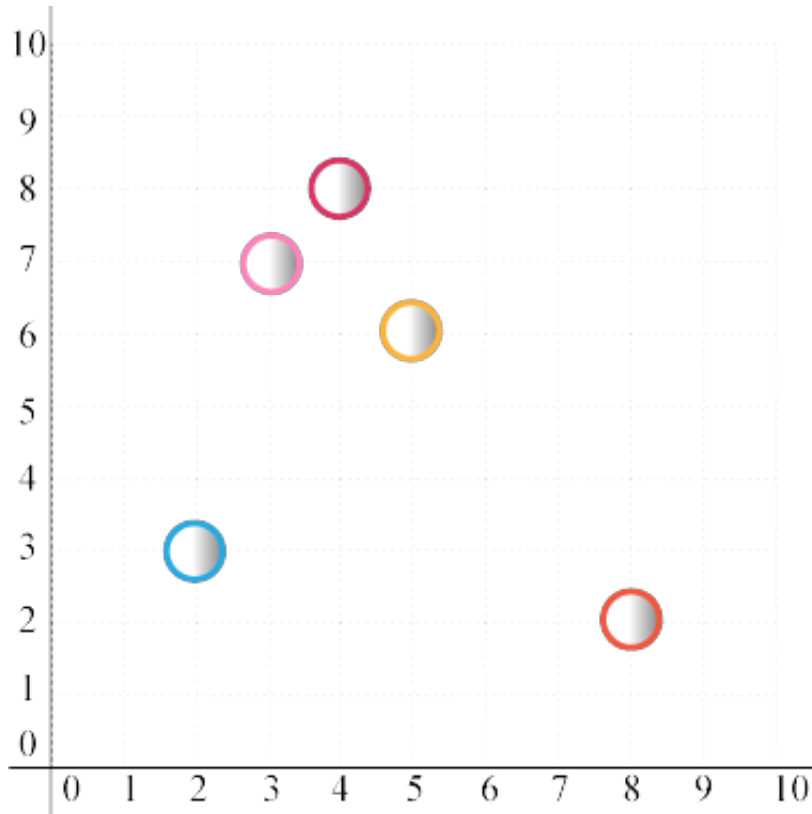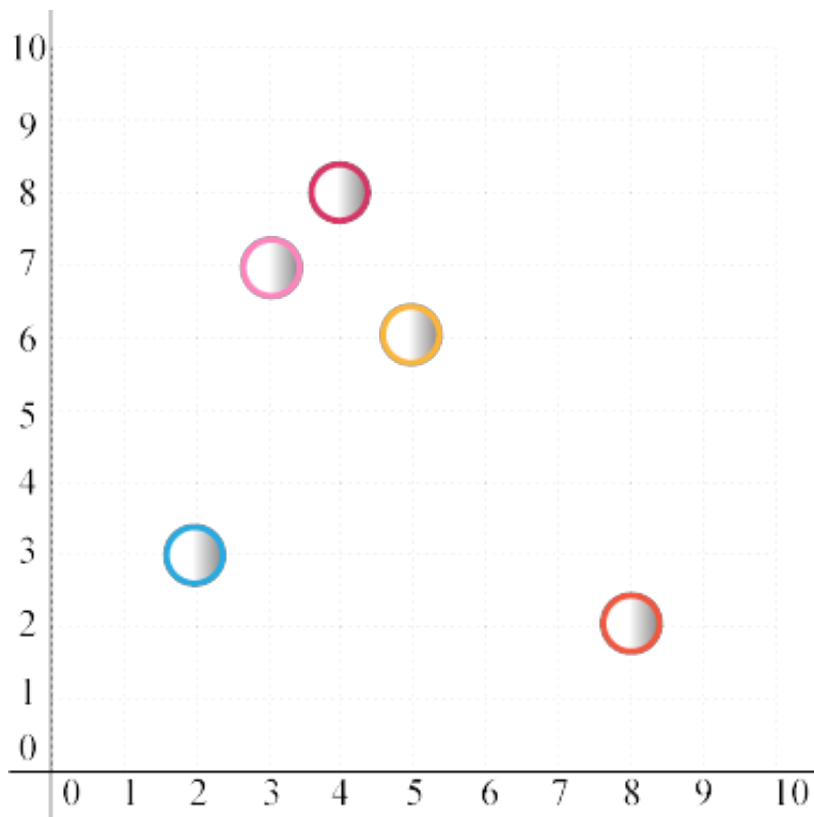## Eighth Grade - Statistics and Probability

1) Determine whether a scatter plot of the data for the following might show a positive, negative, or no relationship. A person's jogging speed and time spent jogging.
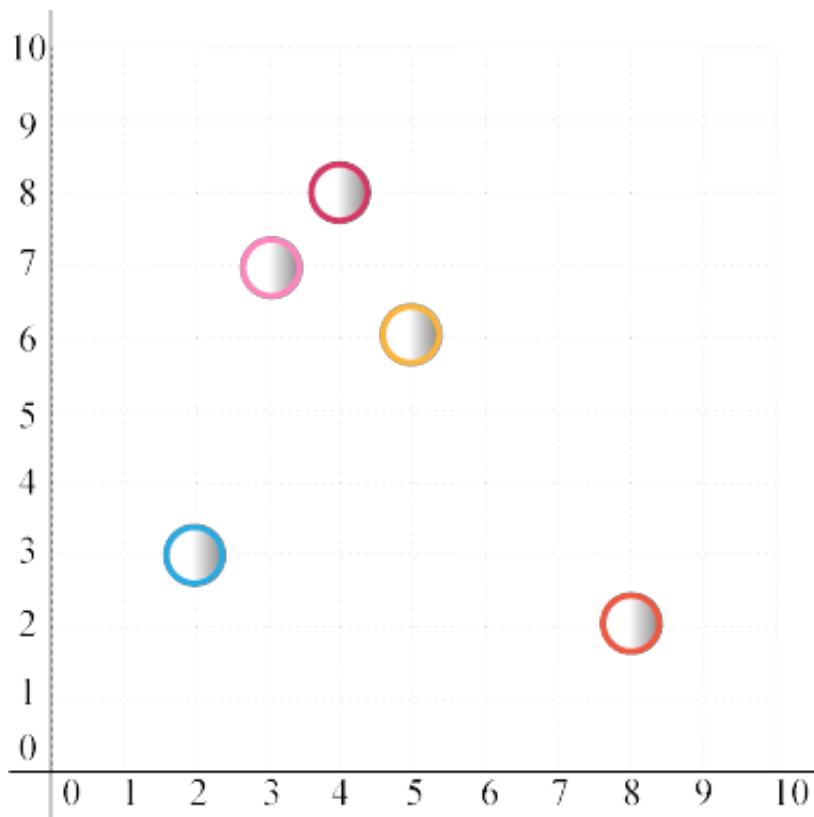

- No relationship
- Positive relationship
- Cannot be Determined
- Negative relationship

2) Determine whether a scatter plot of the data for the following might show a positive, negative, or no relationship. The size of a family and the weekly grocery bill.
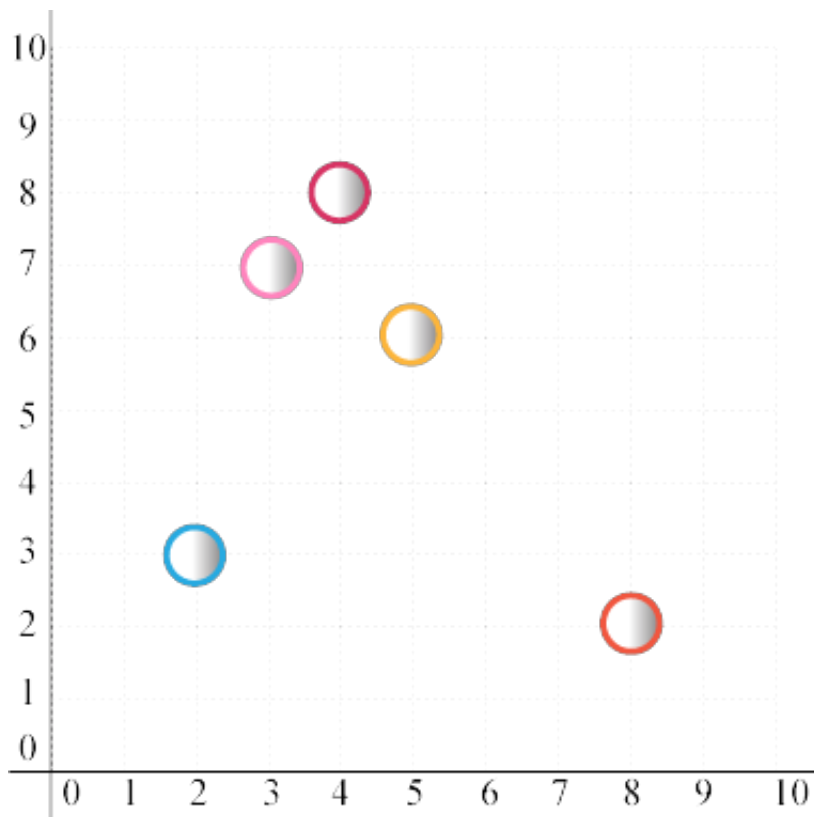
- Cannot be Determined
- Negative relationship
- Positive relationship
- No relationship

3) Determine whether a scatter plot of the data for the following might show a positive, negative, or no relationship. The size of a car and the cost.
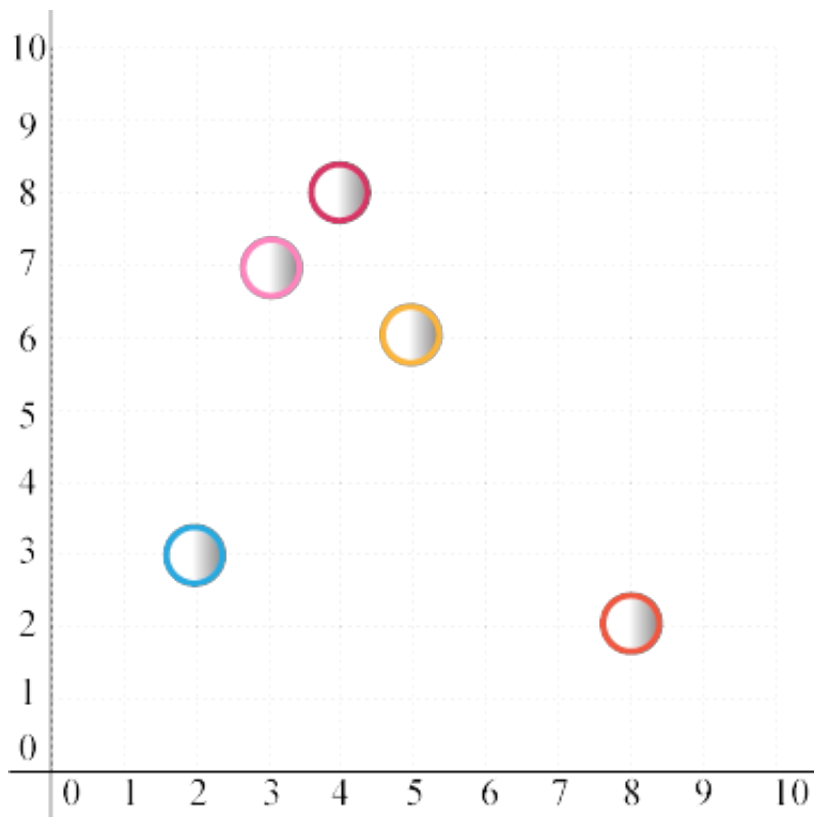
- No relationship
- Cannot be Determined
- Positive relationship
- Negative relationship

4) Determine whether a scatter plot of the data for the following might show a positive, negative, or no relationship. A person's weight and percent body fat

- No relationship
- Cannot be Determined
- Positive relationship
- Negative relationship

5) Determine whether a scatter plot of the data for the following might show a positive, negative, or no relationship. Time spent playing video games and time spent on outdoor activity
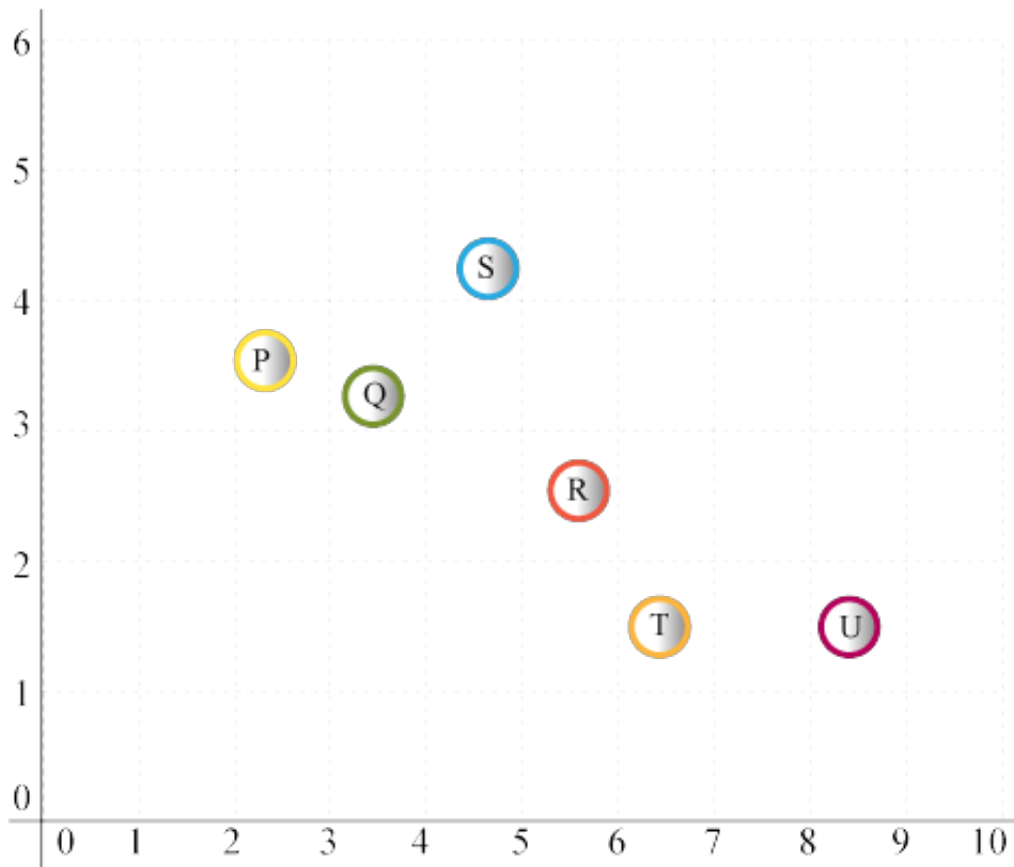
- Negative relationship
- Positive relationship
- No relationship
- Cannot be Determined

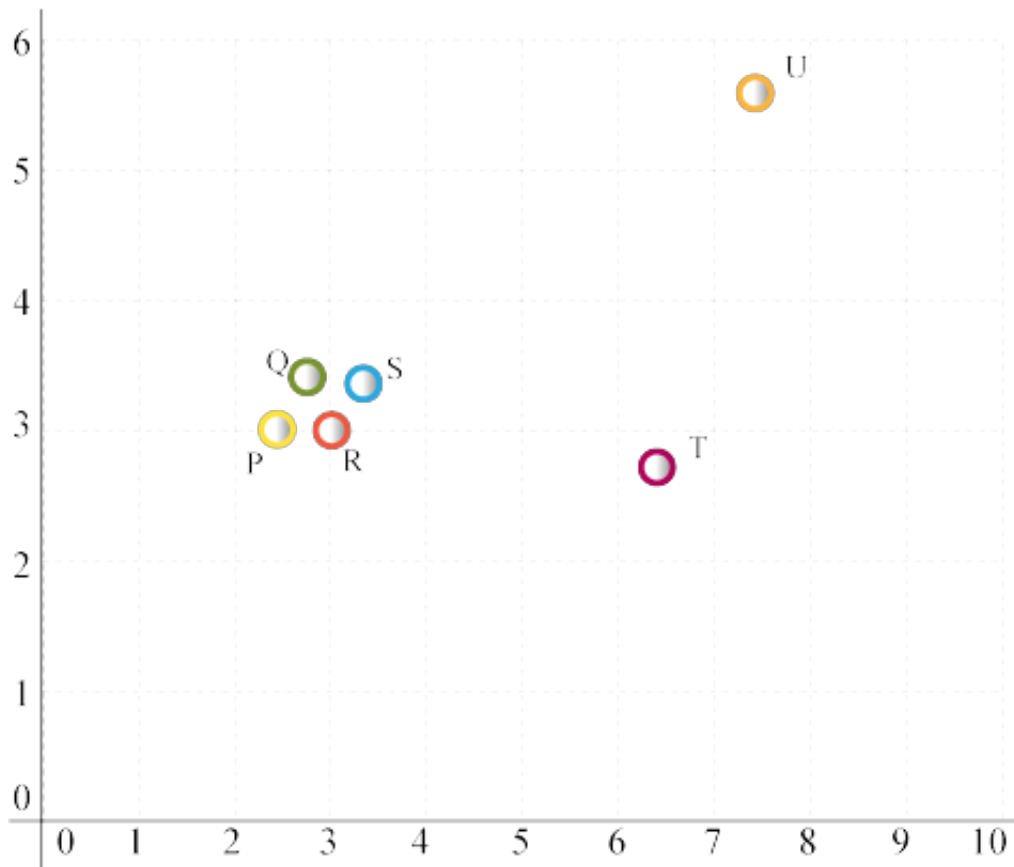6) What kind of trend do you see in the scatter plot?
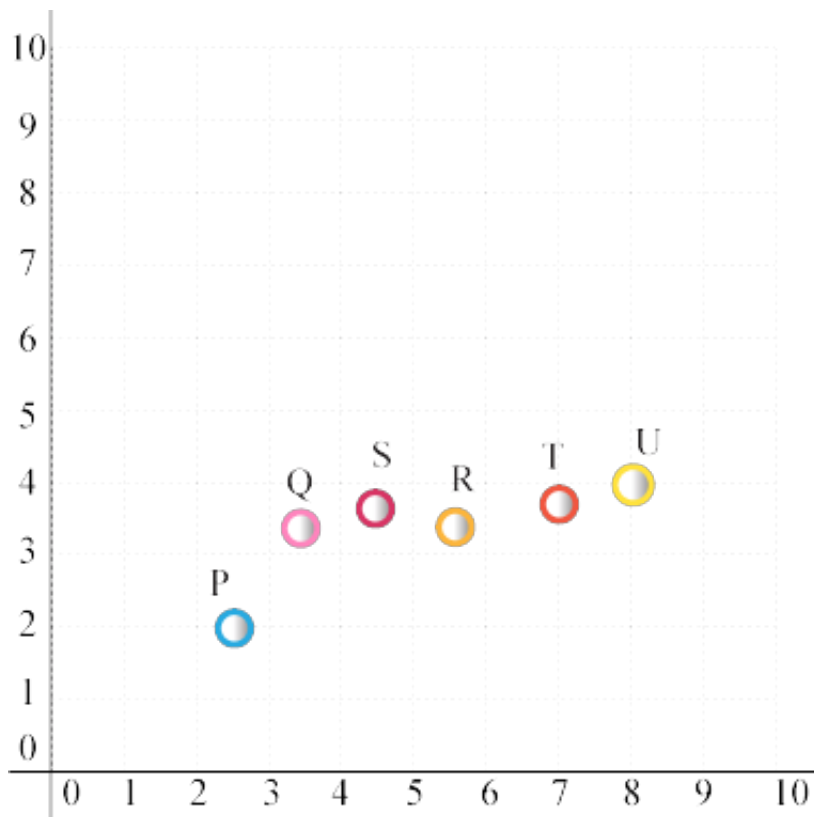
- No trend
- Positive trend
- Data is insufficient
- Negative trend

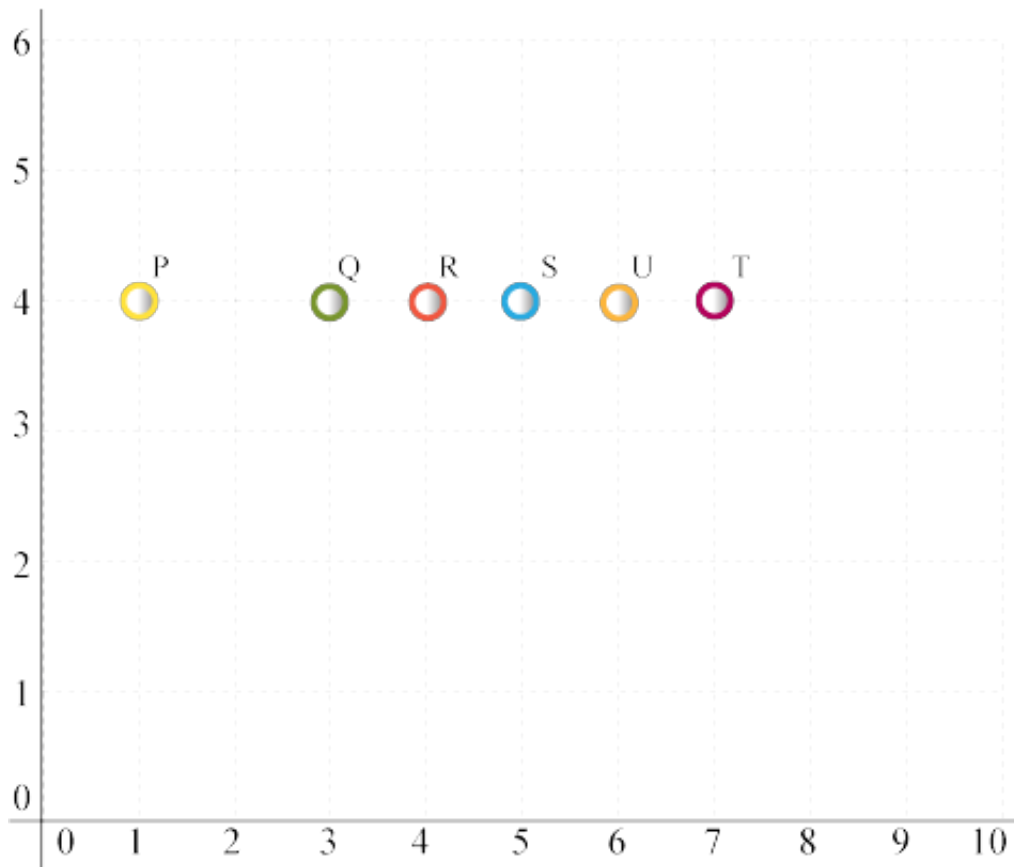7) What kind of trend do you see in the scatter plot?

- Positive trend
- No trend
- Data is insufficient
- Negative trend

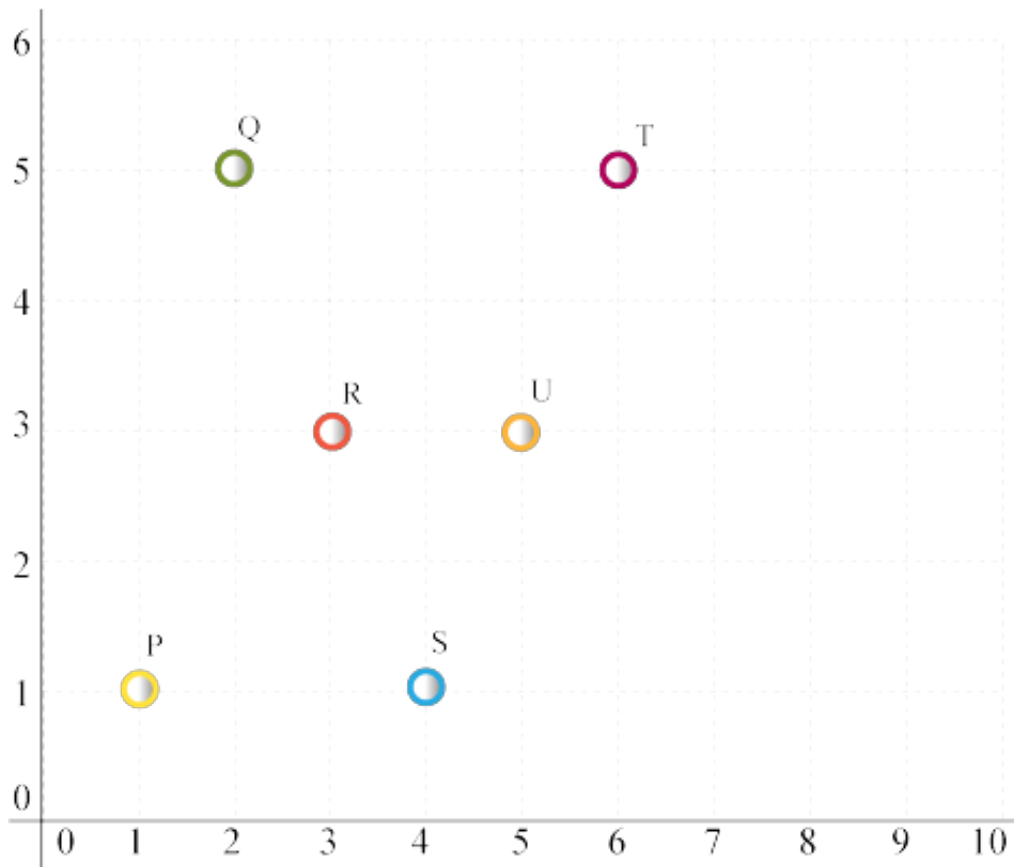8) What kind of trend do you see in the scatter plot?

- Positive trend
- No trend
- Negative trend
- Data is insufficient

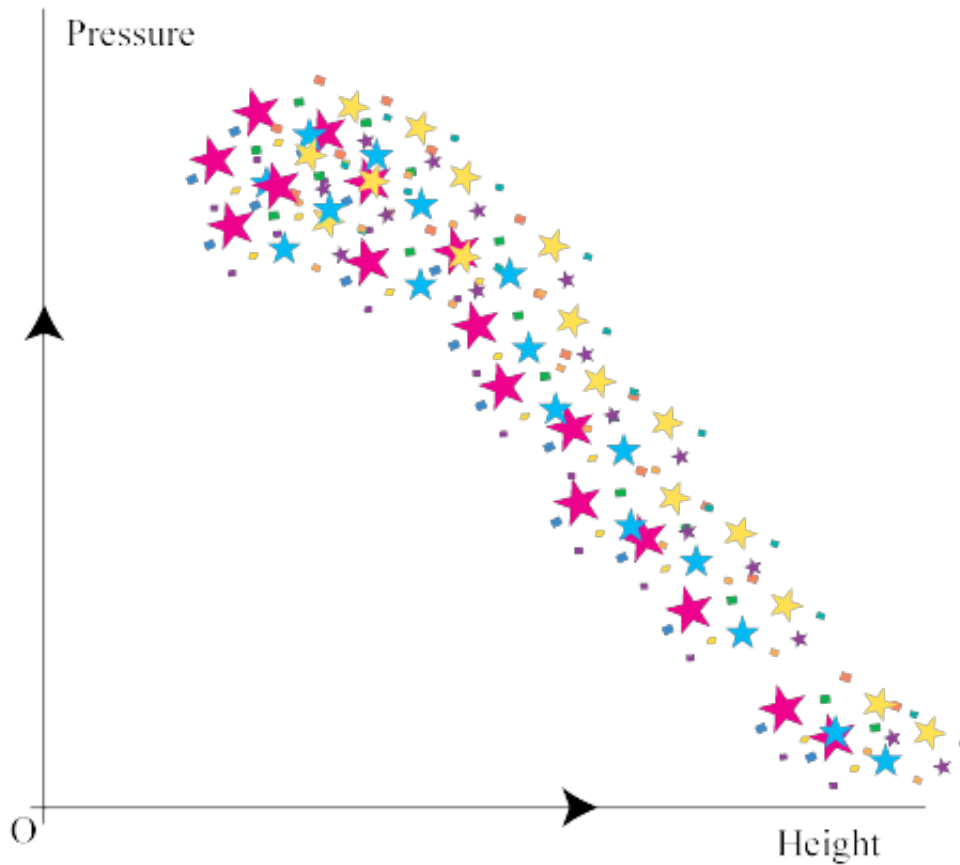9) What kind of trend do you see in the scatter plot?

- Data is insufficient
- Negative trend
- Positive trend
- No trend

10) What kind of trend do you see in the scatter plot?

- Data is insufficient
- No trend
- Positive trend
- Negative trend

11) Which of the following is a correct statement based on the scatter plot shown below?
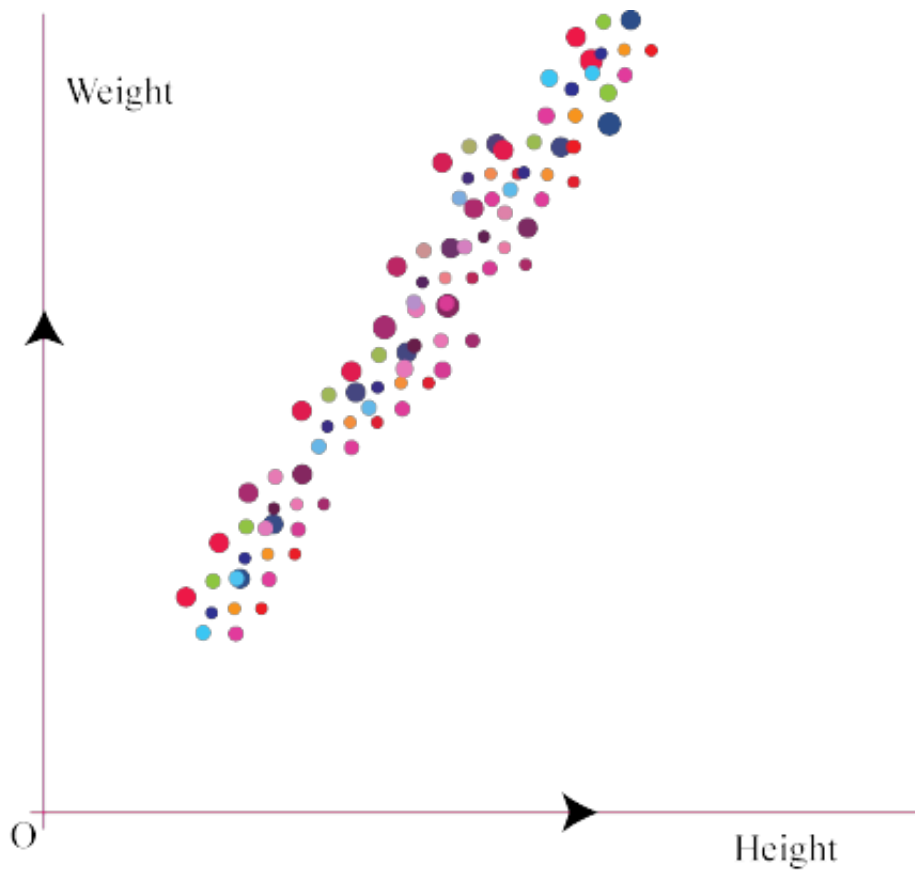
- As pressure decreases height increases
- As pressure increases height also increases
- There is no association between pressure and height
- As pressure decreases height also decreases

12) Which of the following is a correct statement based on the scatter plot shown below?
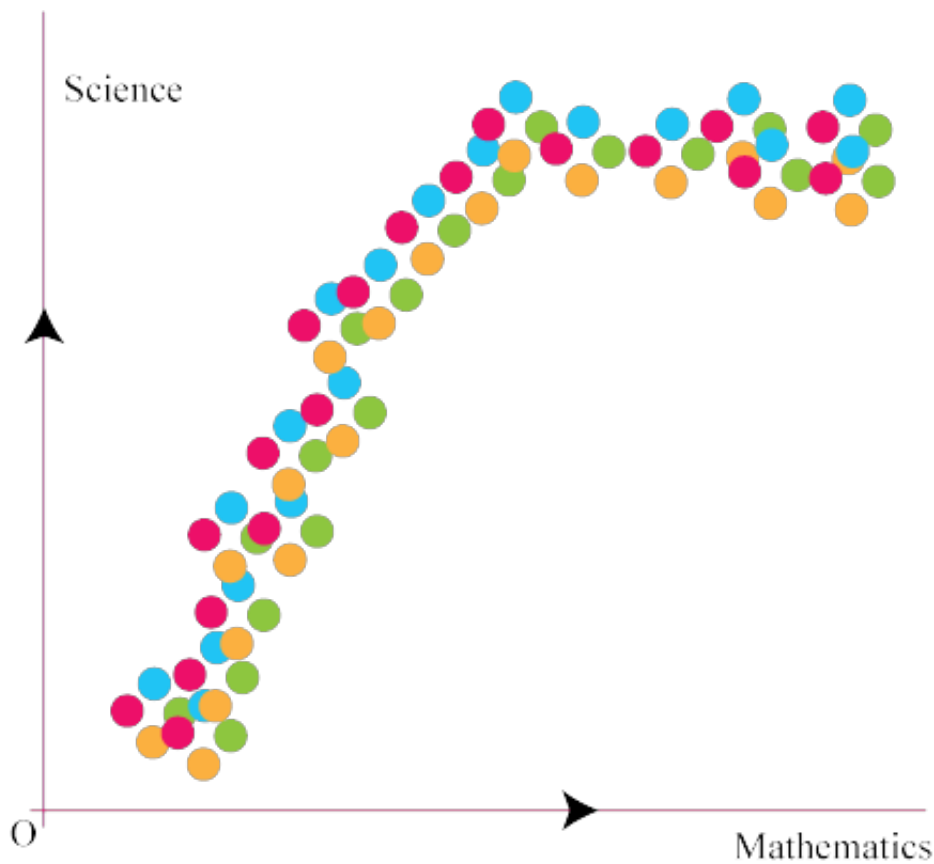
- As maths grade decreases science increases
- As maths grade increases science grade also increases
- There is no association between maths grade and science grade
- As maths grade decreases science grade also decreases

13) Which of the following is a correct statement based on the scatter plot shown below?

- As weight decreases height increases
- As weight increases height also increases
- As weight decreases height also decreases
- There is no association between weight and height

14) Which of the following is a correct statement based on the scatter plot shown below?
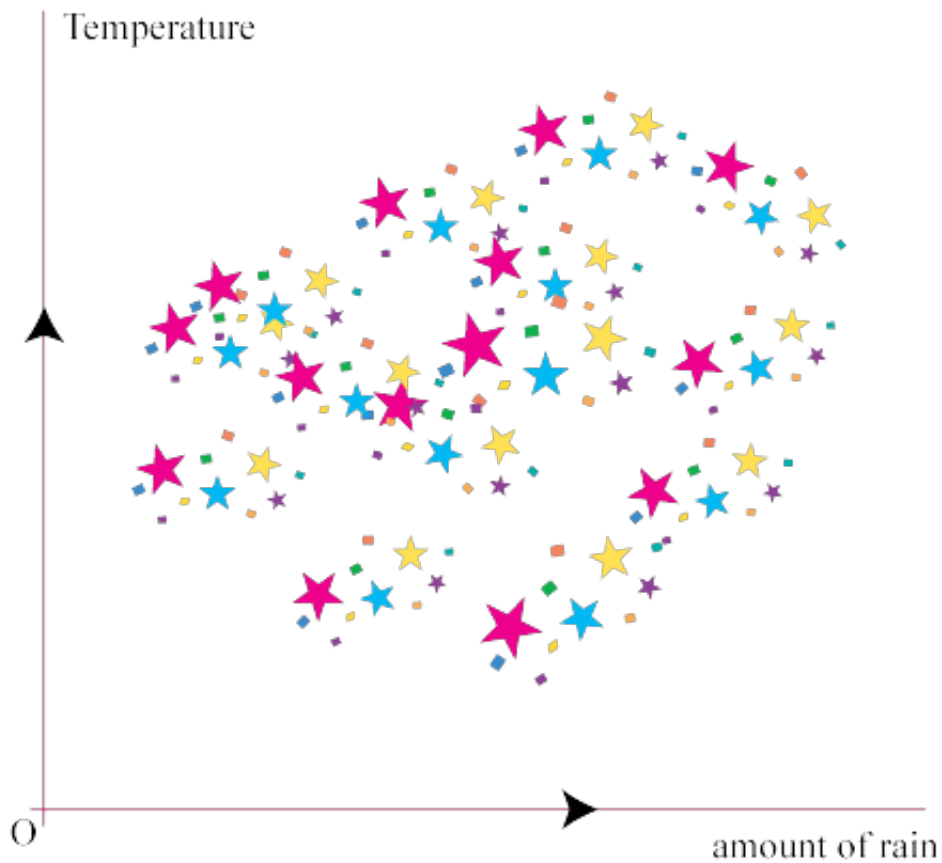
- There is a strong positive relation between the variables
- There is a strong negative relation between the variables
- There is a no relation between the variables
- There is a positive relation between the variables

15) Which of the following is a correct statement based on the scatter plot shown below?
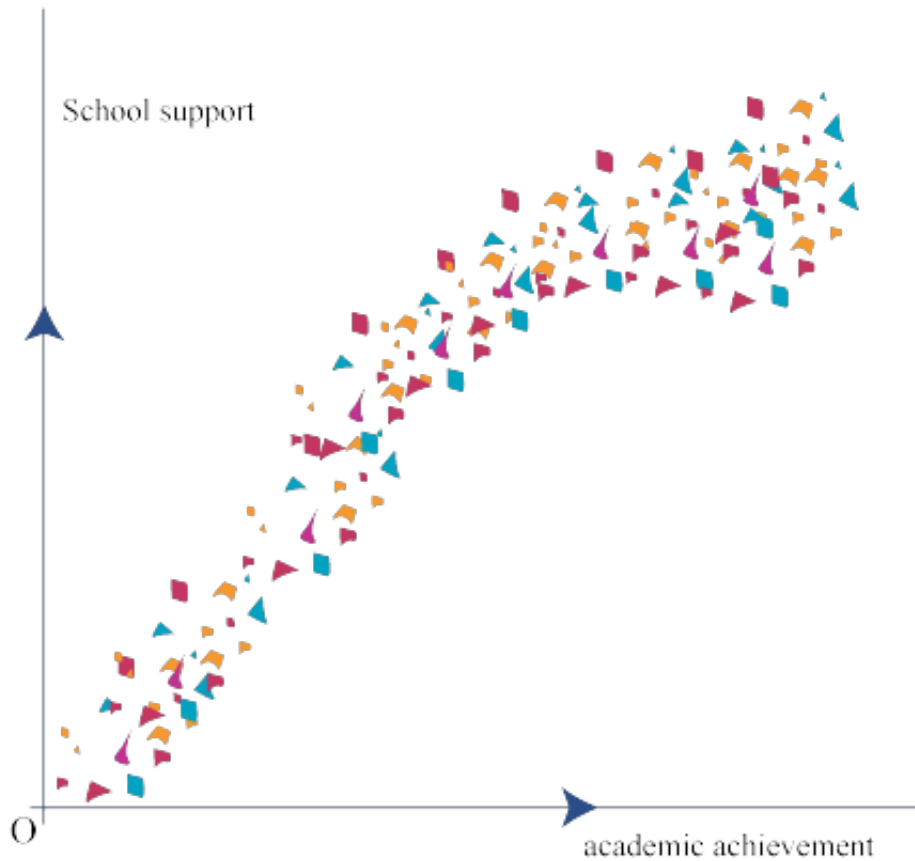
- There is a negative relation between the variables.
- There is a strong negative relation between the variables
- There is a positive relation between the variables
- There is a no relation between the variables

16) Write positive association, negative association, no association or non-linear association to describe the relationship
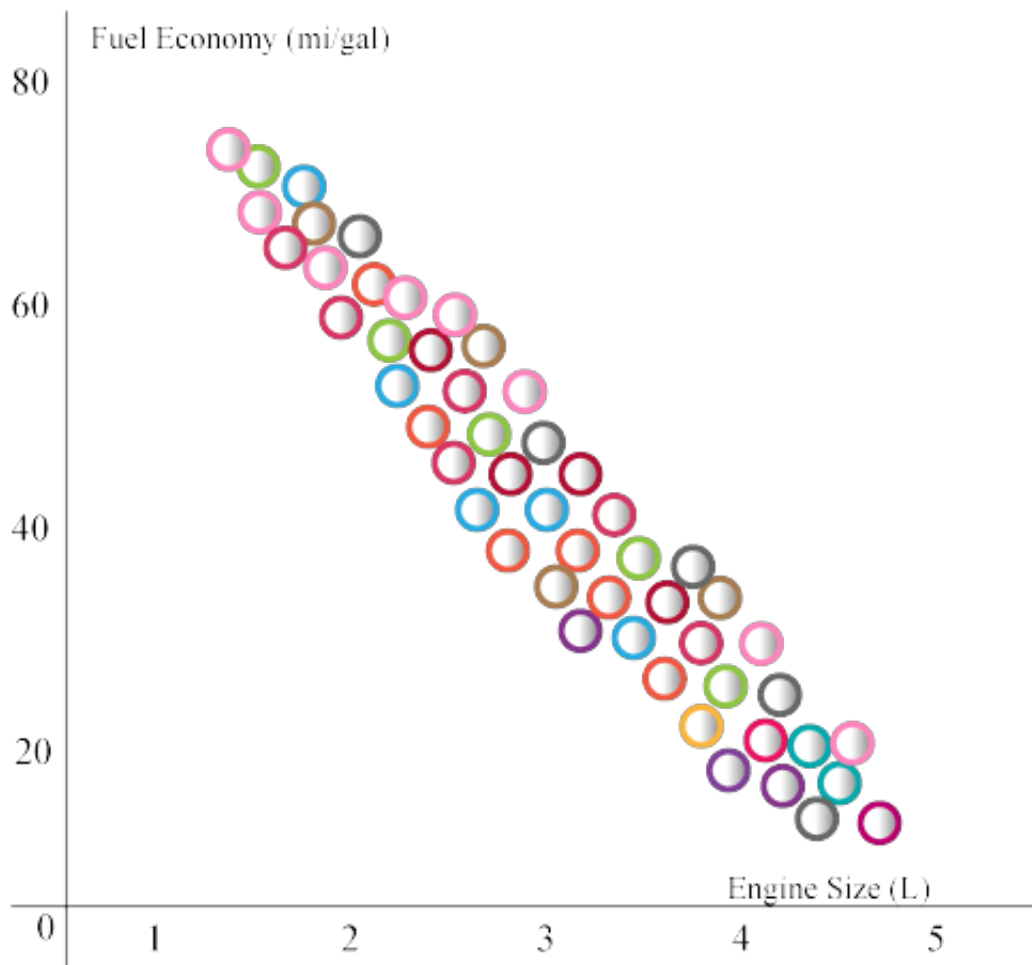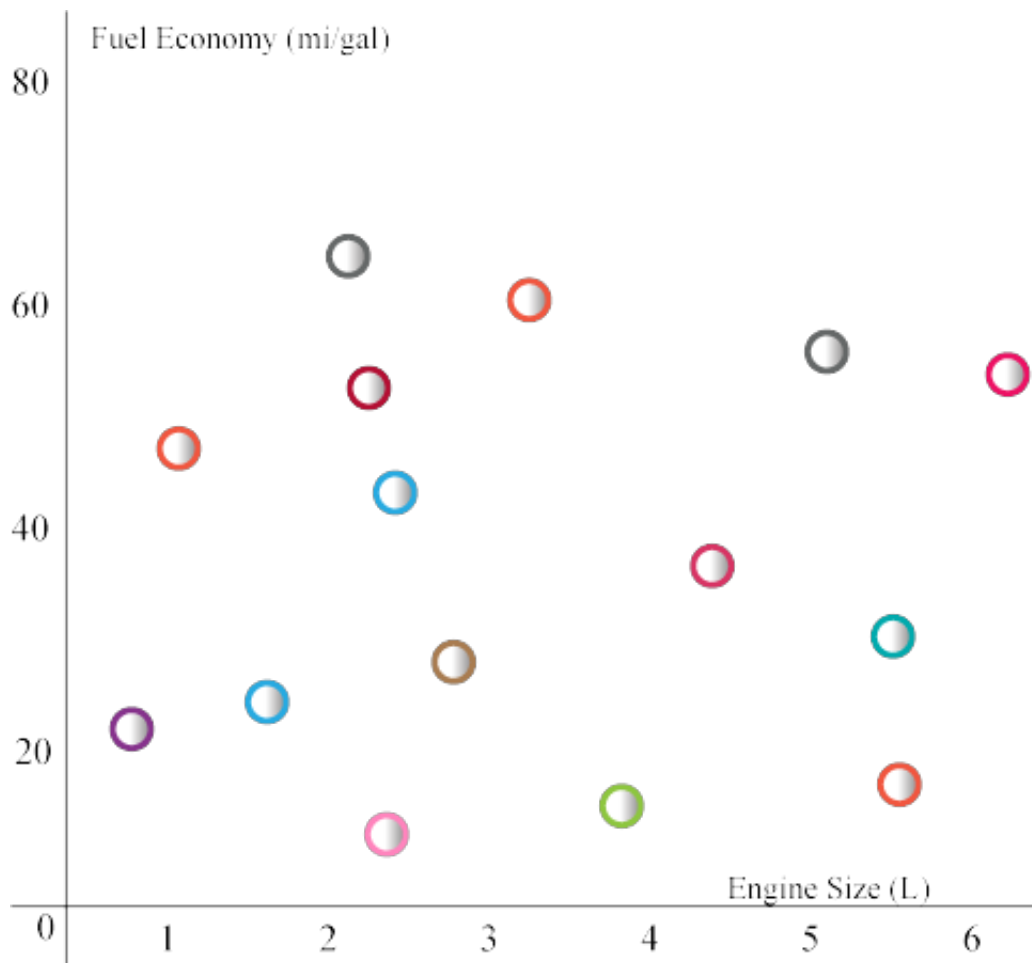
- Positive Linear Association
- No Association
- Negative Linear Association
- Non-linear Association

17) Write positive association, negative association, no association or non-linear association to describe the relationship
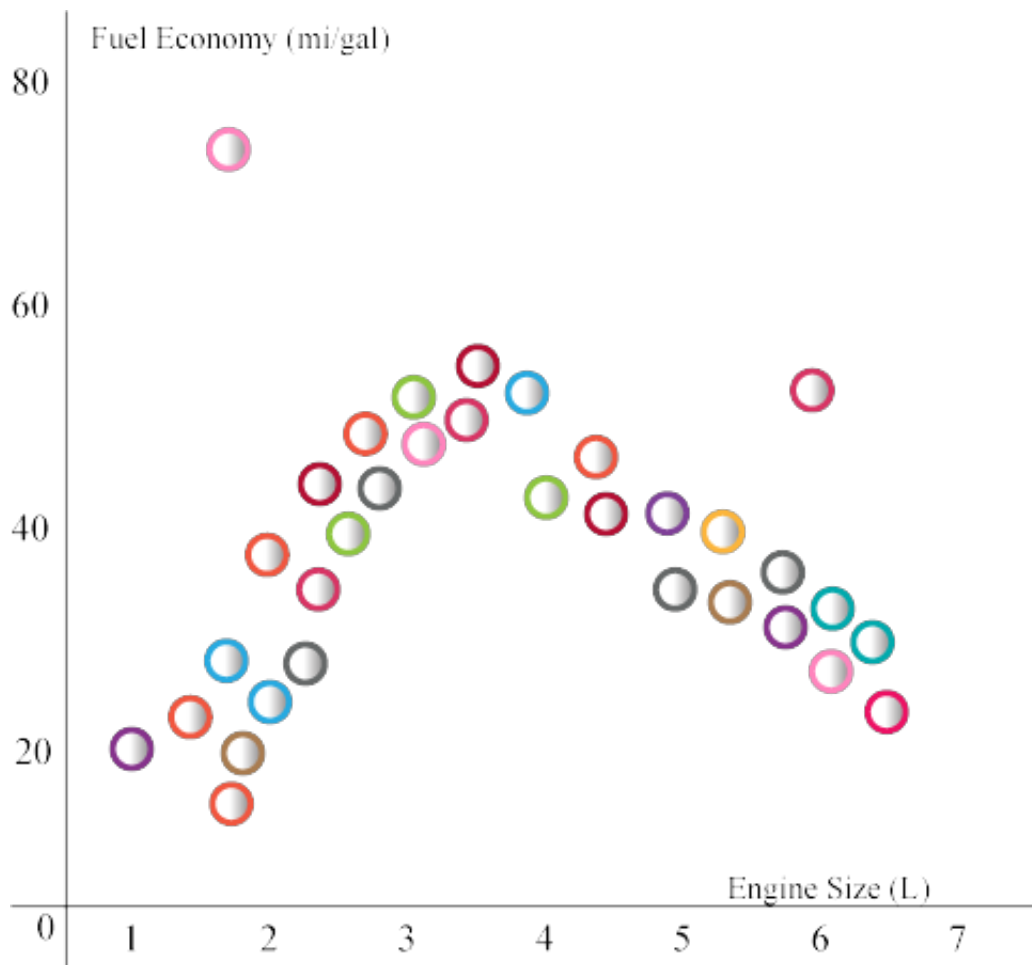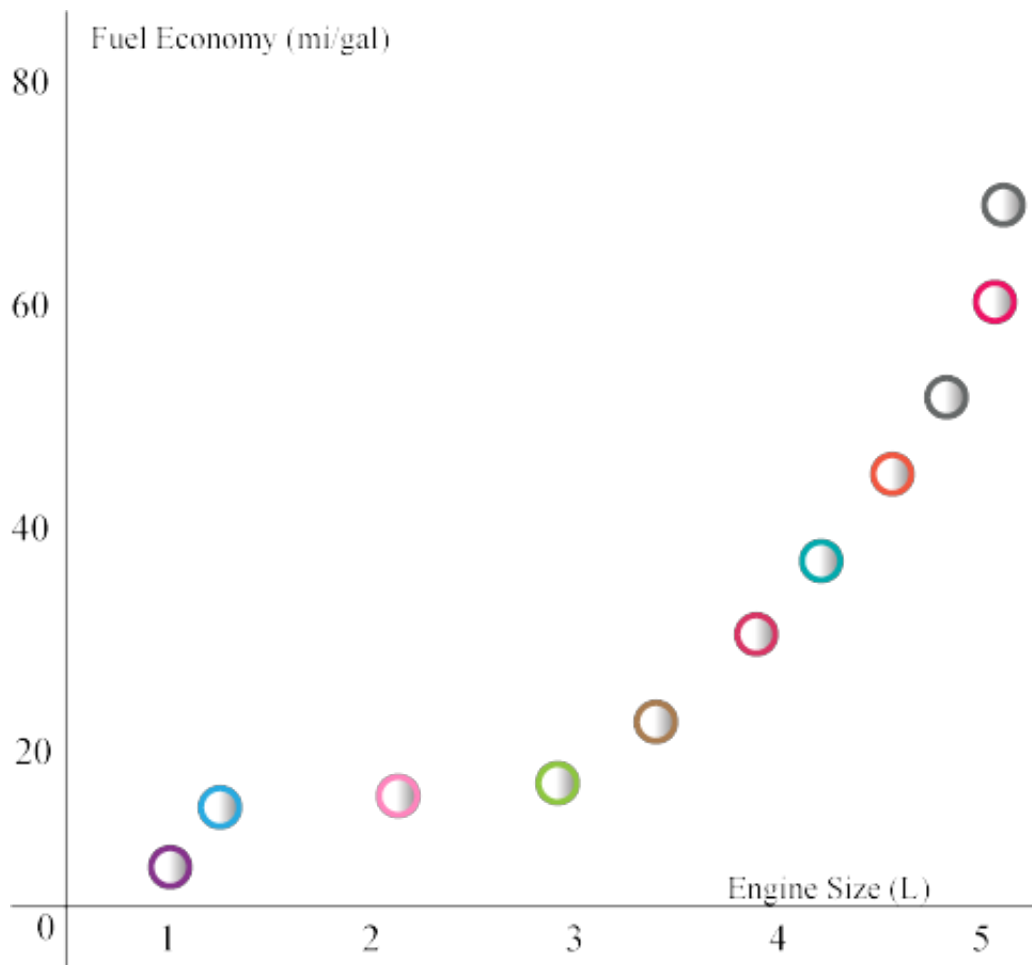
- Positive Linear Association
- Non-linear Association
- No Association
- Negative Linear Association

18) Write positive association, negative association, no association or non-linear association to describe the relationship.
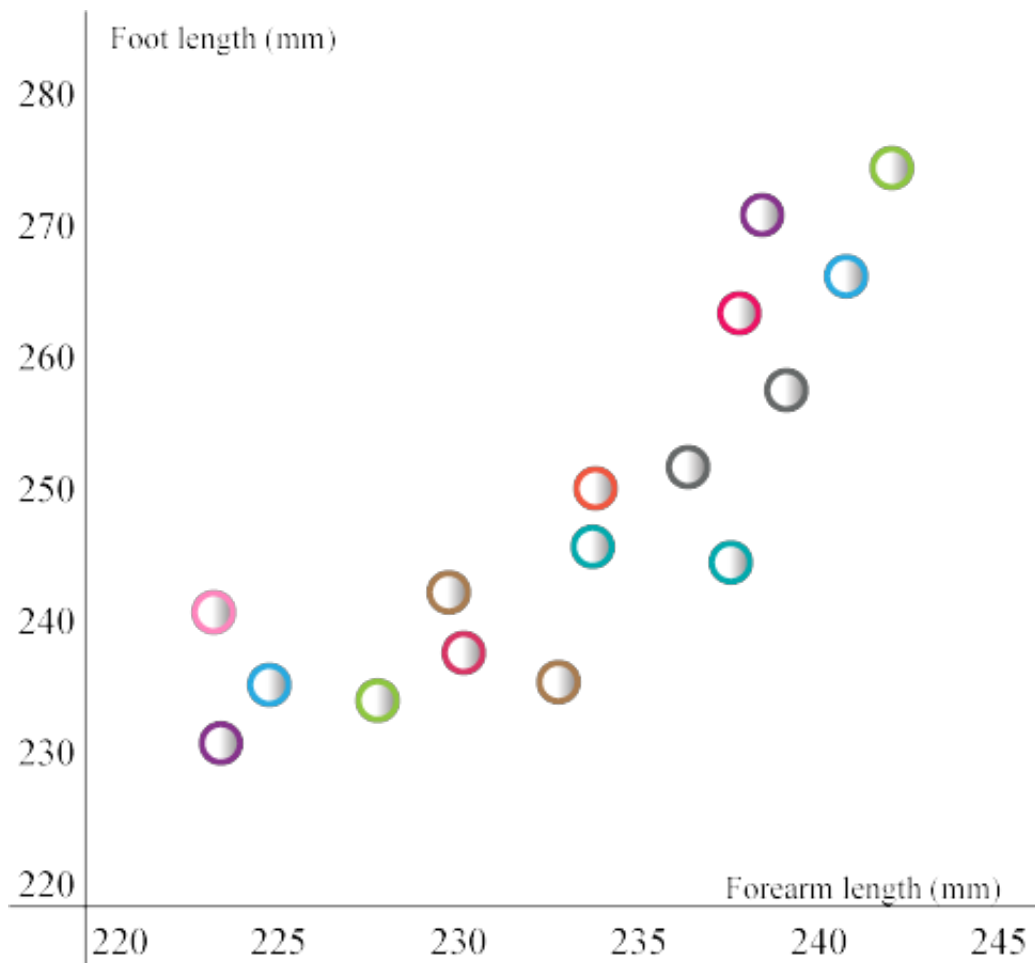
- Negative Linear Association
- Positive Linear Association
- No Association
- Non-linear Association

19) Write positive association, negative association, no association or non-linear association to describe the relationship

- Negative Linear Association
- No Association
- Non-linear Association
- Positive Linear Association

20) Select the best description the association between forearm length and foot length

- Positive association
- We cannot fit a straight line
- No association
- Negative association

21) Match these labels to the diagrams:"no association", "strong positive association","weak positive association","perfect positive association", "perfect negative association", "weak negative association"
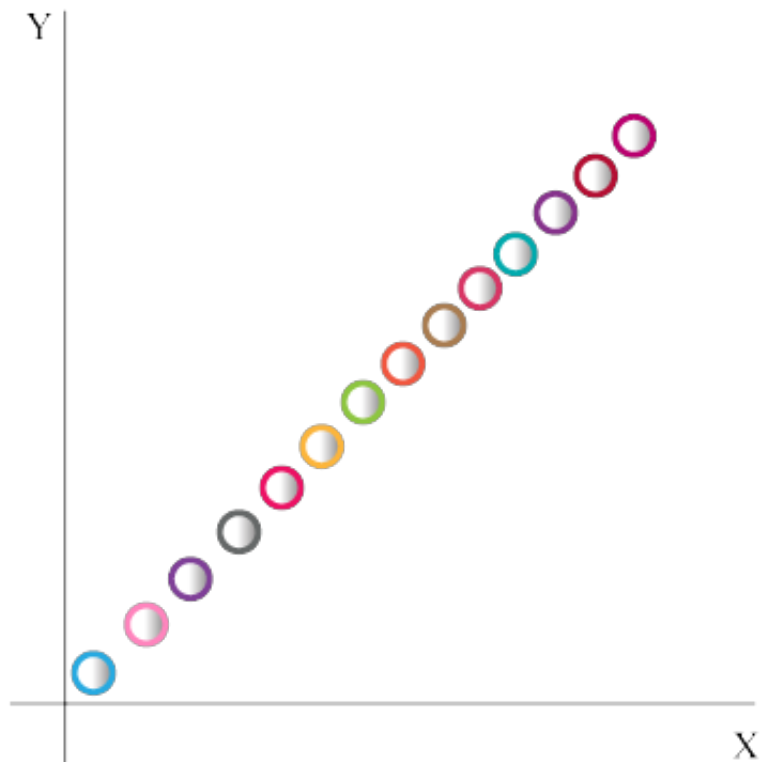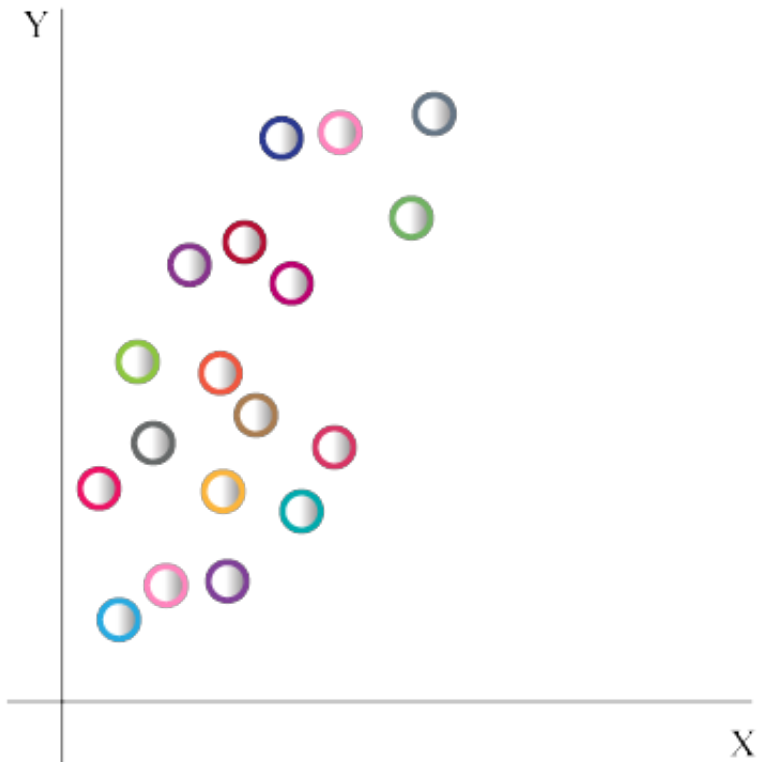
- Weak negative association
- Strong positive association
- Weak positive association
- No association

22) Match these labels to the diagrams:"no association", "strong positive association","weak positive association","perfect positive association", "perfect negative association", "weak negative association", "strong negative association", "Non-linear association"
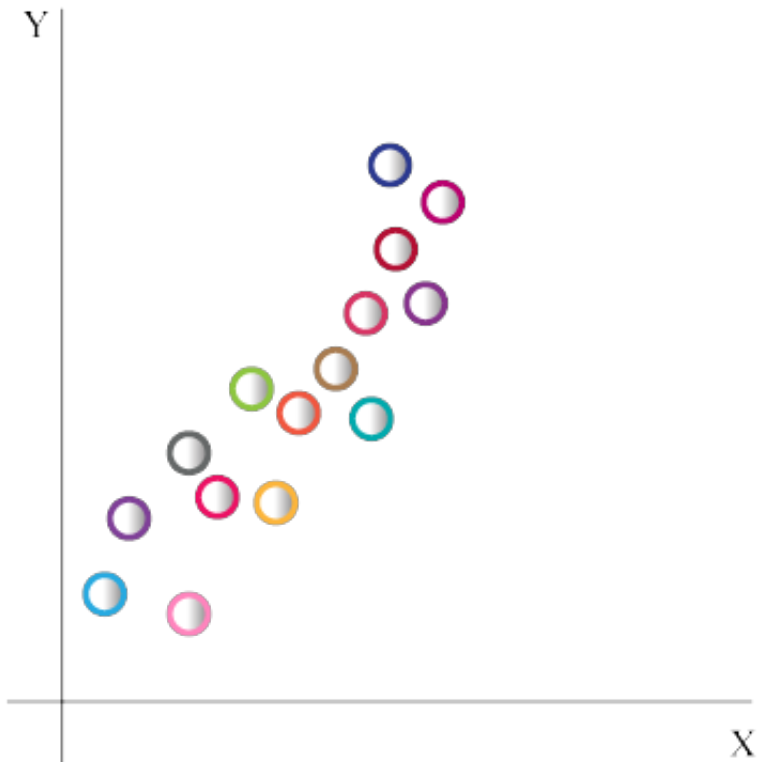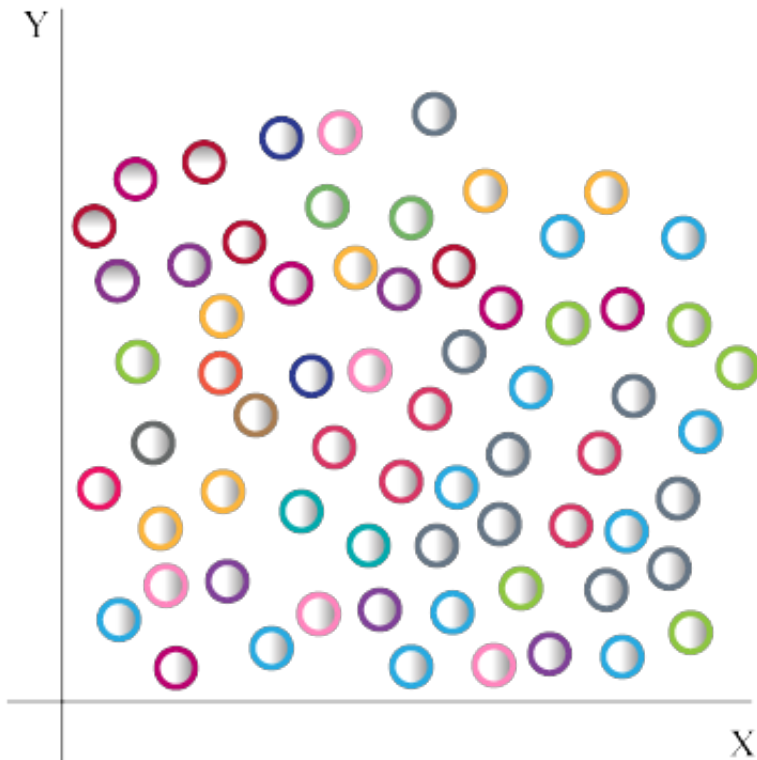
- Weak positive association
- Strong positive association
- Weak negative association
- No association

23) Match these labels to the diagrams:"no association", "strong positive association","weak positive association","perfect positive association", "perfect negative association", "weak negative association", "strong negative association", "Non-linear association"
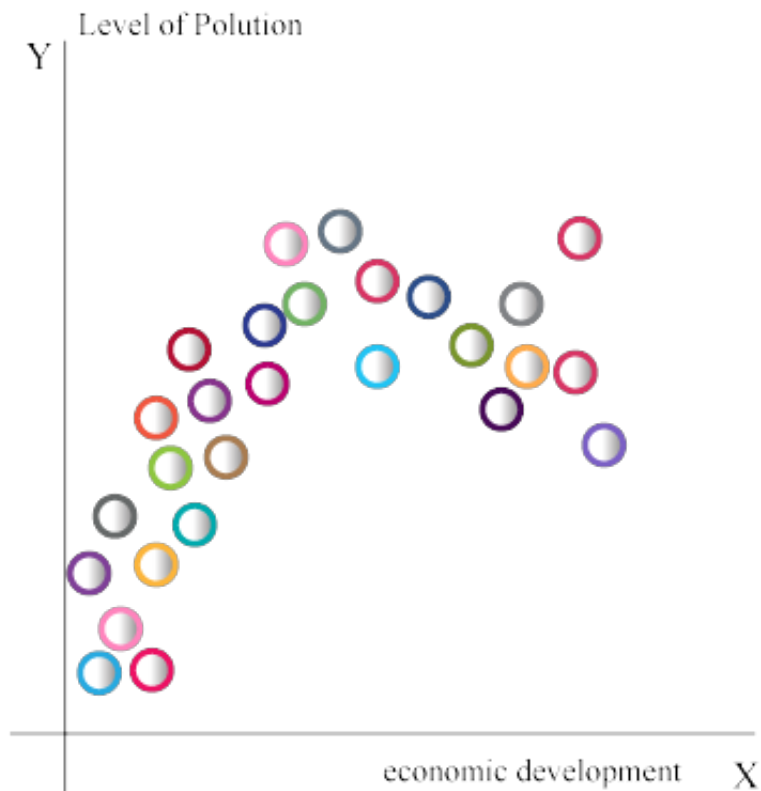
- Strong positive association
- No association
- Weak negative association
- Weak positive association

24) Match these labels to the diagrams:"no association", "strong positive association","weak positive association","perfect positive association", "perfect negative association", "weak negative association", "strong negative association", "Non-linear association"
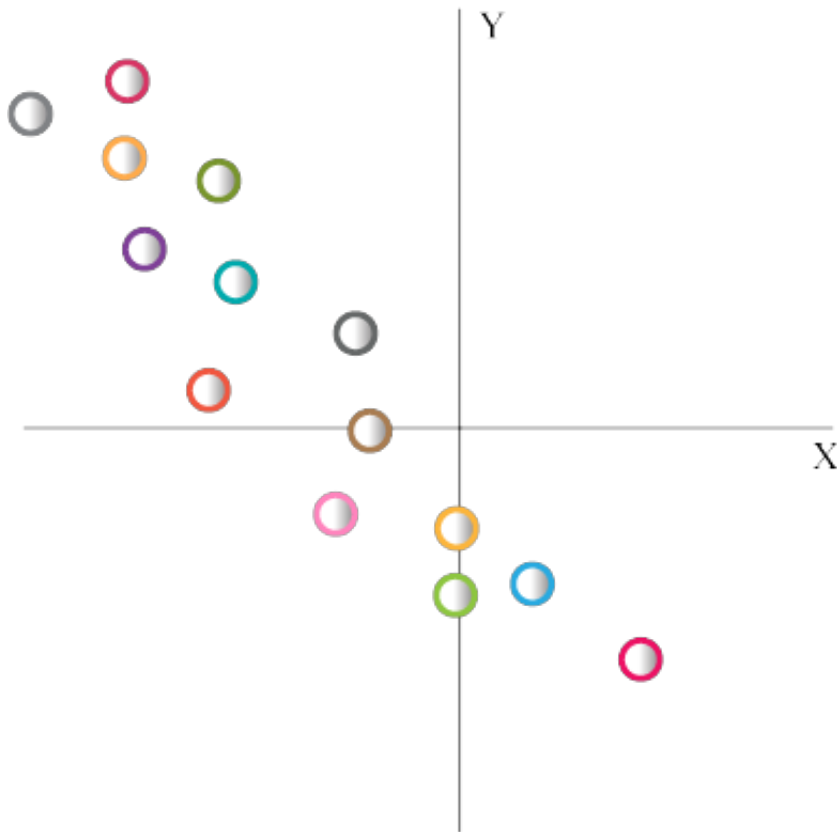
- Non-linear association
- No association, or no correlation between X and Y
- Strong positive association
- Perfect positive association

25) Match these labels to the diagrams:"no association", "strong positive association","weak positive association","perfect positive association", "perfect negative association", "weak negative association", "strong negative association"
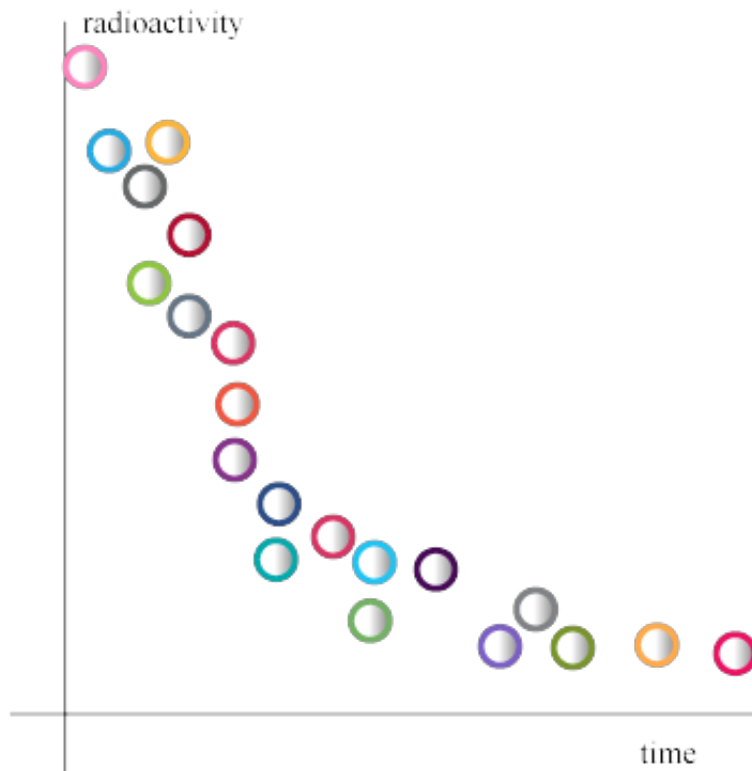
Level of Polution

economic development

- Perfect positive association
- Non-linear association
- Weak negative association
- Strong negative association

26) Match these labels to the diagrams:"no association", "strong positive association","weak positive association","perfect positive association", "perfect negative association", "weak negative association", "strong negative association", "Non-linear association"

- Perfect positive association
- Strong negative association
- Non-linear association
- Weak negative association

27) Match these labels to the diagrams:"no association", "strong positive association","weak positive association","perfect positive association", "perfect negative association", "weak negative association", "strong negative association", "Non-linear association"

- Perfect positive association
- Strong negative association
- Weak negative association
- Non-linear association

28) The length and width of 10 leaves are shown below on the scatter diagram, using a straight edge draw a suitable line of best fit

Q)

Relationship between leaf lenth and width
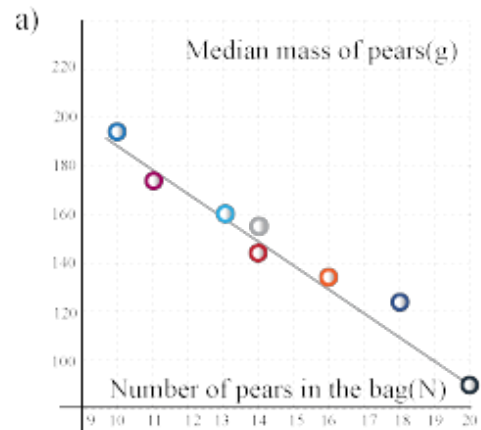
a)
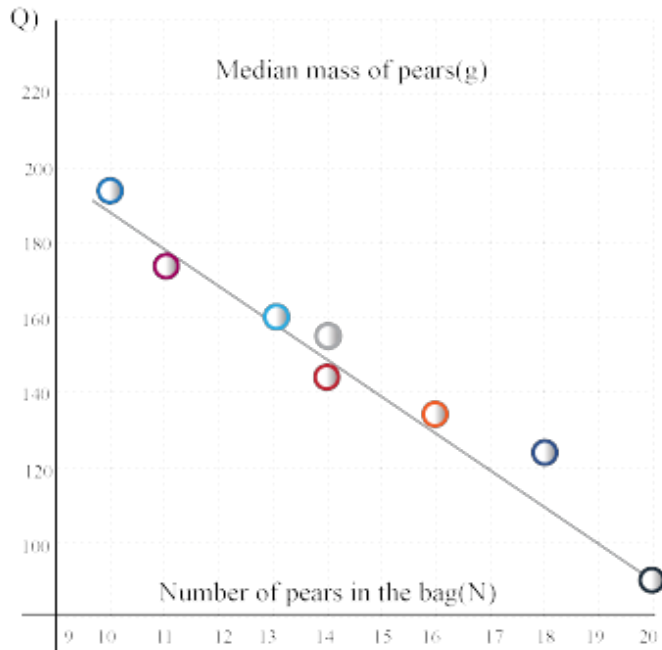

b)

c)

d)

- c
- d
- b
- a
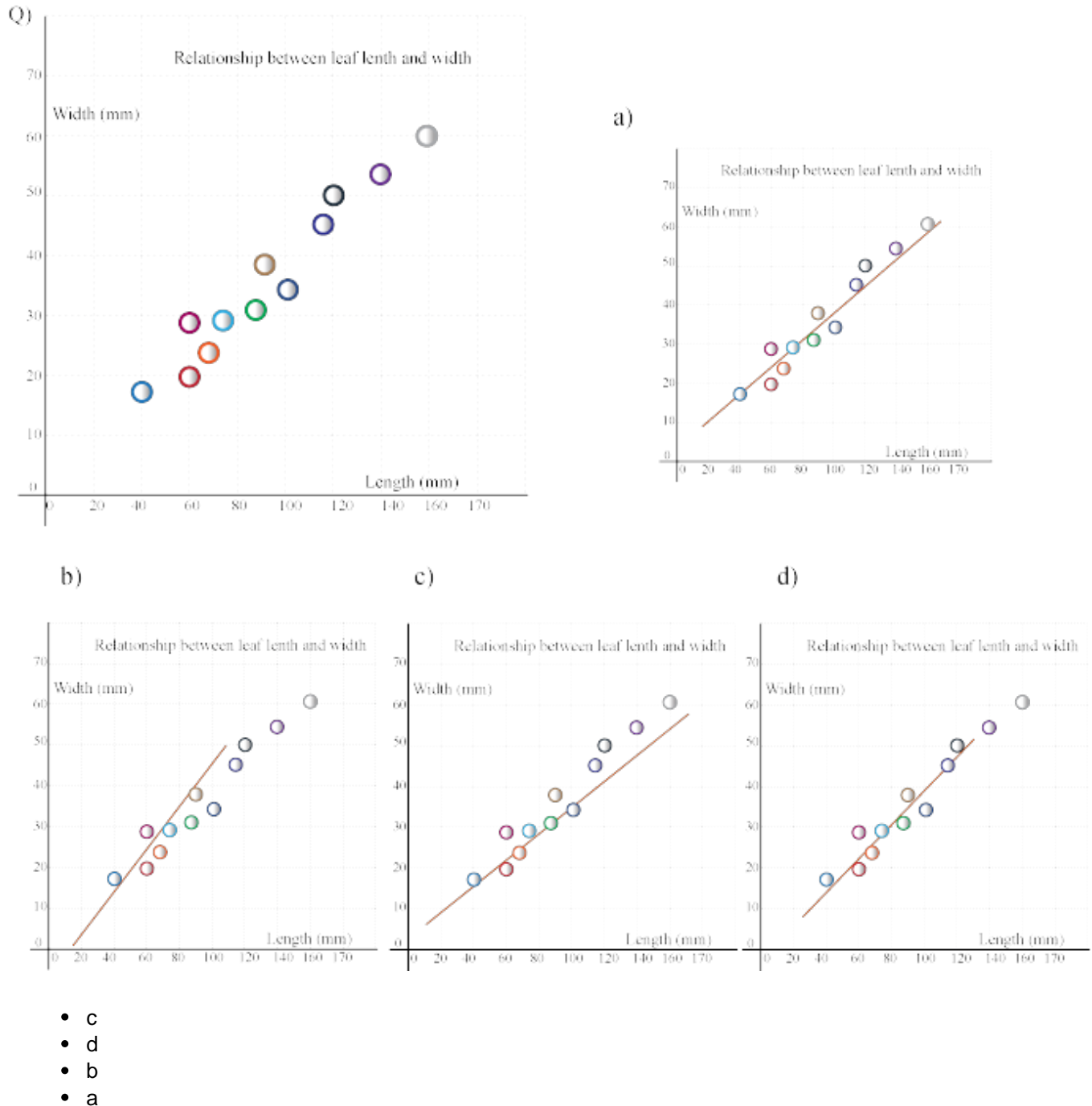
29) The length and width of 10 leaves are shown below on the scatter diagram, write a sentence describing the relationship between leaf length and leaf width for this sample.
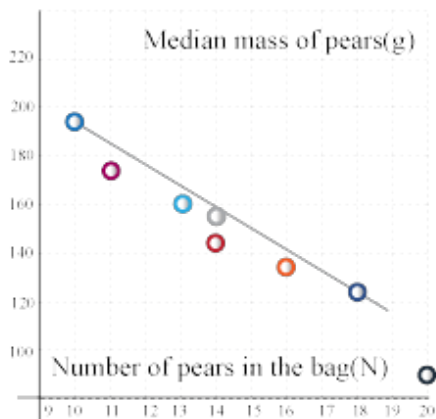
Relationship between leaf lenth and width
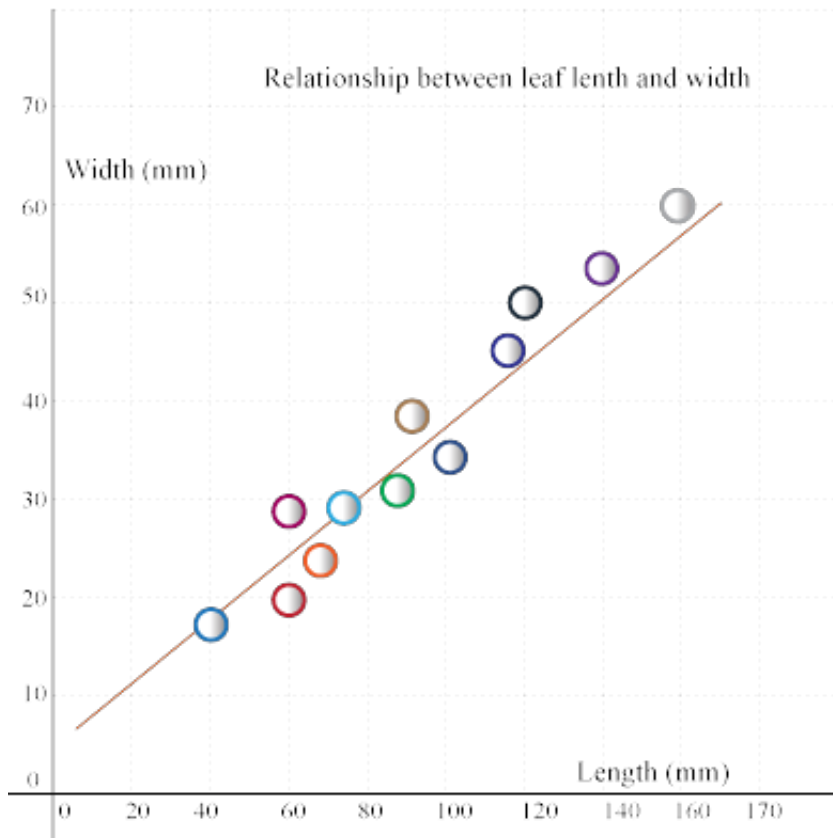
- Length decreases, width decreases
- Length decreases, width increases
- Length increases, width decreases
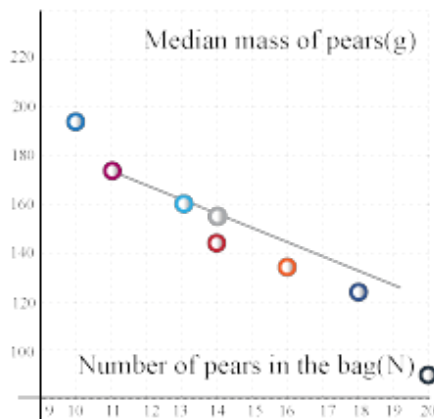- Length increases, width increases

30) Emily is investigating the sizes of pears in 2 kg bags with the help of the scatter diagram shown below: Using straight edge draw a suitable line of best fit.
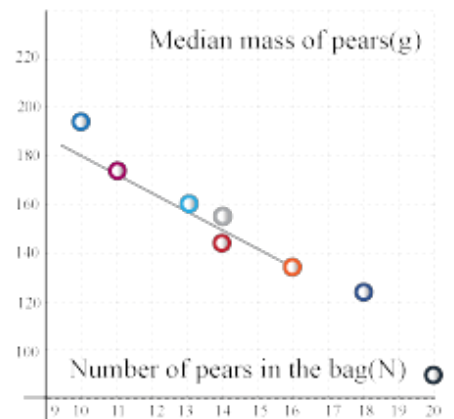
Q)

Median mass of pears(g)

a)

Median mass of pears(g)

b)

Median mass of pears(g)

c)

Median mass of pears(g)

d)

Median mass of pears(g)

Number of pears in the bag(N)

- a
- b
- c
- d