

WALT Learn to read scatter plots

Success Criteria I can see the trend in which the points are moving

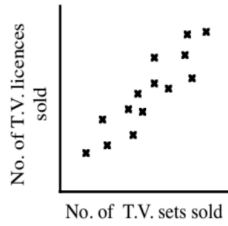
I can list Negative and Positive correlation

Strength of the graph

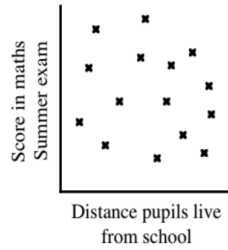
Draw each of the scatter graphs. Use Trends, association, strength,( The graph shows linear, positive/negative - strong, moderate or weak tendency) groupings/clusters and any unusual points. ( for eg no unusual points are found )

D. Draw each scatter graph. Next to each one write what it describes.

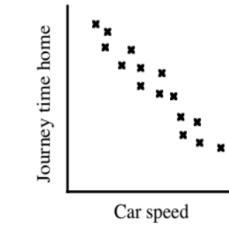
1).



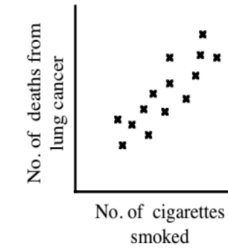
2).



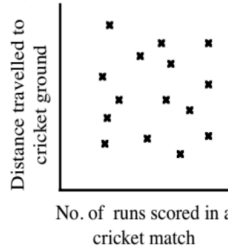
3).



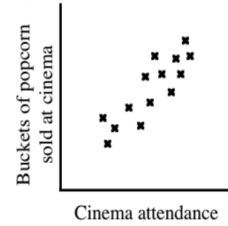
4).



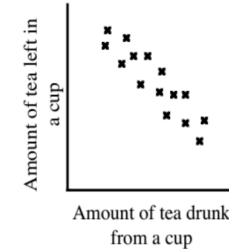
5).



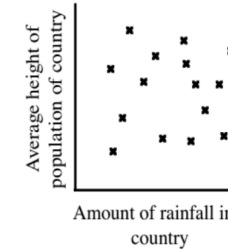
6).



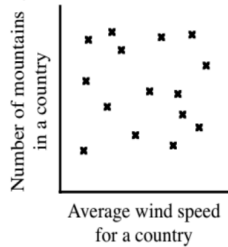
7).



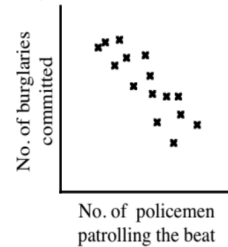
8).



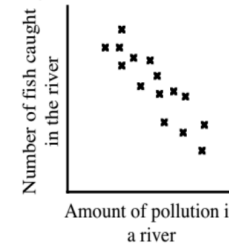
9).



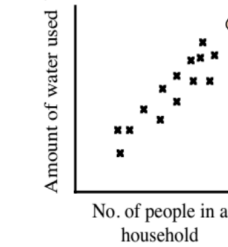
10).



11).



12).



Complete the following scatter graphs



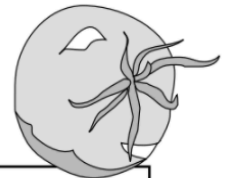
## Correlation 2.



- A. 1). The height (cm) of young tomato plants were measured and the number of leaves on each plant counted. This information is below.

|               |   |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |
|---------------|---|----|----|----|----|----|----|----|---|----|----|----|----|----|----|----|----|
| Height (cm)   | 6 | 28 | 19 | 22 | 10 | 16 | 14 | 23 | 9 | 26 | 18 | 24 | 21 | 12 | 20 | 17 | 14 |
| No. of leaves | 1 | 16 | 8  | 4  | 2  | 7  | 5  | 11 | 3 | 15 | 10 | 13 | 12 | 5  | 11 | 9  | 6  |

- Plot this information on a scatter graph.
- Comment on the correlation of this graph.
- If a plant has 10 leaves, use your graph to estimate the height you would expect it to be.
- If a plant was 12 cm tall, use your graph to estimate the number of leaves you would expect it to have.
- There is one plant that does not appear to fit in, which one is it ?



- 2). A class sits two maths papers out of 80. Here are the results.

|         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|---------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Paper 1 | 76 | 30 | 21 | 39 | 60 | 30 | 49 | 38 | 64 | 69 | 51 | 34 | 55 | 26 | 44 | 59 | 42 |
| Paper 2 | 80 | 48 | 25 | 41 | 59 | 23 | 56 | 28 | 70 | 71 | 51 | 31 | 57 | 22 | 44 | 65 | 38 |

- Plot this information on a scatter graph.
- Comment on the correlation of this graph.
- One pupil missed Paper 2, but scored 62 on Paper 1. Use your graph to estimate the mark you would expect this pupil to get on Paper 2.
- Another pupil missed Paper 1, but scored 29 on Paper 2. Use your graph to estimate the mark you would expect this pupil to get on Paper 1.
- One pupil didn't feel well for paper 1. Look at your scatter graph and say which one it is ?

- 3). Bill recorded the maximum speed he reaches and the journey time to work every day.

|              |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|--------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Journey Time | 39 | 3  | 16 | 30 | 11 | 34 | 19 | 26 | 6  | 13 | 20 | 23 | 27 | 34 | 9  | 31 | 37 |
| Max. speed   | 5  | 48 | 34 | 17 | 42 | 34 | 26 | 22 | 44 | 37 | 29 | 25 | 19 | 13 | 40 | 15 | 9  |

- Plot this information on a scatter graph.
- Comment on the correlation of this graph.
- If Bill's journey takes 25 minutes, find a good estimate of his maximum speed.
- If Bill's maximum speed is 35 Km/h, give an estimate for the length of his journey time.
- One day Bill was diverted and had to go a longer way home.  
Which plot on your graph was this ?

