

Analysing scatter plots (TARSOG)



Describe each plot's Trend, Association, Relationship, Scatter, Outliers, and Groupings.

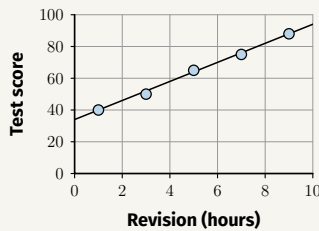
Name _____

Date _____

Reading a scatter plot

TARSOG: **Trend** (linear/non-linear), **Association** (positive/negative), **Relationship** strength (weak/moderate/strong), **Scatter** (constant/non-constant spread), **Outliers** (points that don't fit), **Groupings** (separate clusters).

Worked example This scatter plot shows revision hours against test score. Describe the trend, association, and relationship strength.

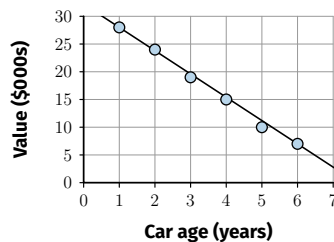


Trend: linear. Association: positive (score rises as revision hours rise).

Relationship: strong – the points sit close to the line.

1. Describe the trend, association, and relationship strength shown here.

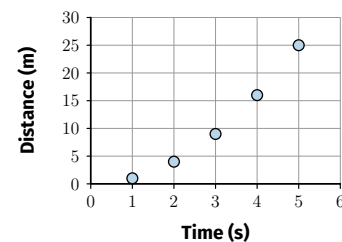
Solution: Linear, negative (value falls as age rises), strong – points sit close to the line.



Working

2. Is the trend linear or non-linear? Describe the pattern.

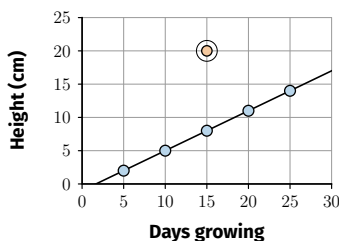
Solution: Non-linear – distance increases faster and faster as time increases (curves upward).



Working

3. Describe the overall pattern. Which point is the outlier?

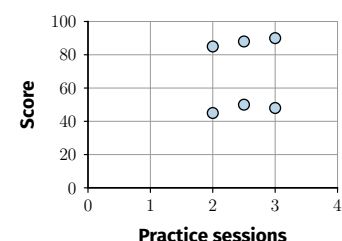
Solution: Linear, positive, moderate-to-strong overall. The point at 15 days (20cm) is the outlier – much taller than expected for that many days.



Working

4. This plot shows two groupings. What might explain them?

Solution: One cluster scores 85–90, another scores 45–50 at similar practice levels – a hidden factor (e.g. prior experience) may separate the two groups.



Working

Analysing scatter plots (TARSOG) (continued)

Describe each plot's Trend, Association, Relationship, Scatter, Outliers, and Groupings.

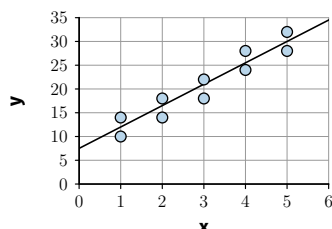


Name _____

Date _____

5. Is the scatter constant or non-constant? Explain your answer.

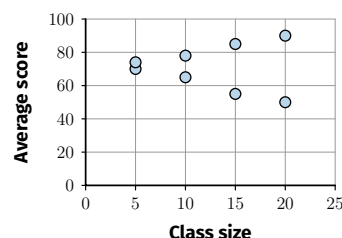
Solution: Constant – points stay about the same distance from the line across the whole range.



Working

6. Is the scatter constant or non-constant? Explain your answer.

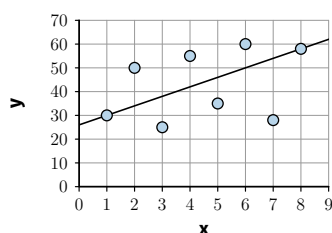
Solution: Non-constant – the spread of scores increases as class size increases (funnel shape).



Working

7. Describe the relationship strength shown here, and explain your reasoning.

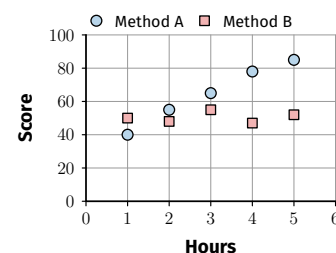
Solution: Weak – there is a slight positive trend, but the points are scattered widely around the line.



Working

8. Compare the relationship shown by Method A and Method B.

Solution: Method A: strong positive relationship (score rises consistently with hours). Method B: little to no relationship (scores stay roughly flat).



Working