Guide to: Scatter graphs

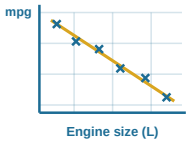
maths Links

Explanation:

A **scatter graph** plots pairs of values to investigate whether two variables are related. **Correlation** can be **positive** (as one increases, the other increases), **negative** (as one increases, the other decreases), or **no correlation**. An **outlier** is an isolated point that does not fit the general trend.

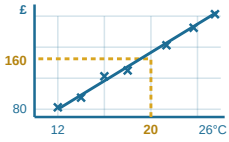
Always draw a straight **line of best fit** with a ruler through the middle of the points (ignoring any outliers) before estimating a value. Estimating within the data range (**interpolation**) is reliable; estimating outside the data range (**extrapolation**) is **unreliable** because the trend may not continue.

Example 1: A scatter graph plots engine size (L) against fuel efficiency (mpg). State the correlation and describe the relationship.



Negative correlation.
As engine size increases, mpg decreases.

Example 2: Ice cream sales (£) are plotted from **12°C to 26°C**. Estimate sales at **20°C**, and explain why estimating at **38°C** is unreliable.



At 20°C: **£160**.
38°C is **outside data range** (extrapolation).

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Corbettmaths (Practice)	Qs	Ans	**PMT (Edexcel)**	Qs	Ans
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ken@mathslinks.co.uk