

<p>Give two measures of dispersion.</p>	<p>What information should be included in graphs, charts or diagrams?</p>
<p>Range Interquartile range Standard deviation</p>	<p>Scale or key Labels (with units) on axes Title</p>
<p>When do you use a back to back stem and leaf diagram?</p>	<p>What is important but often forgotten when drawing a stem and leaf diagram?</p>
<p>When comparing two sets of data</p>	<p>The key</p>
<p>What are comparative pie charts?</p>	<p>What is a choropleth?</p>
<p>Two or more pie charts where the area of each circle is in proportion to the total frequencies</p>	<p>A diagram where different regions are shaded; the darker the shading the higher the value of data for the region (e.g. showing population density on a map)</p>
<p>In a box and whisker diagram, which values define the size of the box?</p>	<p>How is the median shown on a box and whisker diagram?</p>
<p>The upper and lower quartiles</p>	<p>A vertical line inside the box</p>

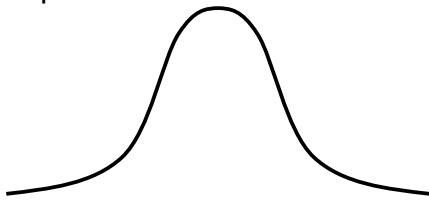
<p>What does the vertical axis always show in a histogram?</p>	<p>How do you work out the frequency of a class in a histogram?</p>
<p>Frequency density</p>	<p>class width × frequency density (calculate the area of the bar)</p>
<p>How do you estimate the mode from a histogram?</p>	<p>Give two disadvantages of using a pictogram.</p>
<p>Find the modal group, join the top corners diagonally to the top corners of the adjacent bars. Read down from the intersection to the horizontal axis.</p>	<p>Time consuming to draw Difficult to get all pictures the same if being hand drawn Difficult to read fractions of a picture accurately</p>
<p>What does a population pyramid look like?</p>	<p>When is it useful to use a population pyramid?</p>
<p>Similar to two horizontal bar charts displayed back to back</p>	<p>When comparing two sets of similar data (e.g. male and female ages of the population)</p>
<p>The formula for a straight line is <math>y = mx + c</math>. What do <math>m</math> and <math>c</math> tell us?</p>	<p>How do you calculate the gradient of a straight line?</p>
<p><math>m</math> = gradient of the line <math>c</math> = intercept on <math>y</math>-axis</p>	$\frac{\text{vertical change}}{\text{horizontal change}} = \frac{y_2 - y_1}{x_2 - x_1}$

What does a scatter graph show?	On a scatter graph, which point must the line of best fit pass through?
The correlation or relationship between two variables	The mean point: $(\bar{x}, \bar{y})$
What is a time series?	What is a trend line and what does it show?
Numerical data recorded at given intervals of time, presented on a graph	A line, similar to a line of best fit, drawn on a time series graph  Shows the general changes over time
Name the three different types of variation found on a time series graph.	On a cumulative frequency diagram, where is the data plotted?
Random Cyclical Seasonal	At the upper end of the class boundary
What kind of cumulative frequency diagram is used for continuous data?	What kind of cumulative frequency diagram is used for discrete data?
Cumulative frequency curve	Cumulative frequency step diagram

Describe/draw the shape of the curve in a normal distribution.

What is true about the mean, median and mode in a normal distribution?

Bell shaped:



They are all equal and lie on the line of symmetry

In a normal distribution, what percentage of values lie within one standard deviation of the mean?

In a normal distribution, what percentage of values lie within two standard deviations of the mean?

68%

(34% either side of the mean)

95%

In a normal distribution, nearly all values lie within how many standard deviations of the mean?

Describe/draw a distribution with positive skew.

99.5% of values lie within 3 standard deviations

Most values are low, the median is closer to the lower quartile:

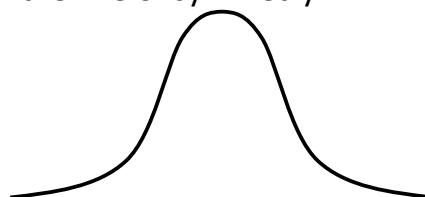


Describe/draw a distribution with negative skew.

Describe/draw a symmetrical distribution.

Most values are high, the median is closer to the upper quartile:

Bell shaped. Mean, median and mode lie on the line of symmetry:



<p>What does interpolate mean?</p>	<p>What does extrapolate mean?</p>
<p>Estimate a value between two values already known, e.g. by reading from a line of best fit</p>	<p>Estimate a value outside the range of known values, e.g. by extending a line of best fit</p>
<p>On a graph where the scale does not begin at zero, what should you include?</p>	<p>Give two ways in which a graph might be misleading.</p>
<p>A 'break' in the graph – shown by a zigzag at the start of the axes</p>	<p>Scales don't start from zero Scales are not linear No labelling or titles to show context or units</p>
<p>If the lengths in a diagram are made twice as big, what happens to the area?</p>	<p>If the lengths in a diagram are multiplied by <math>k</math>, what happens to the area and the volume?</p>
<p>It is multiplied by 4 (<math>2^2</math>)</p>	<p>Area multiplied by <math>k^2</math> Volume multiplied by <math>k^3</math></p>