

Q-QUIZ FEBRUARY 2019 - ANSWERS



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Collecting and evaluating figures, data and facts provides the basis for continuous improvement. There are various analysis tools available in quality management applying to different situations, such as diagrams and graphics. Have a look at the respective situation and find the matching tool!

1. The **value chart** plots values of a quality characteristic in their original time sequence. Upward and downside trends can be easily recognised. A value chart generally records and shows typical process parameters.

2. The **scatter plot** analyses two quality characteristics including continuous characteristic values. It is based on a pair of values plotted on a coordinate plane. The way the value pairs are scattered indicates whether there might be a relation between these values. For a better illustration, scatter plots show specific symbols instead of points.

3. The **histogram** shows the distribution of a quality characteristic's subgroup data. However, at least 50 subgroup values have to be available. Each individual value is assigned to a specific class and the respective classes are illustrated by means of

bars. In 1786, the histogram was first applied in Scotland; however, it was not until 1891 that English mathematician Karl Pearson introduced it under this name.

4. The **Pareto chart** simplifies the analysis of data collected in error log sheets or tally charts. Individual values are represented in descending order by bars. The bar heights indicate the number of recorded values collected in this data category. All bars are displayed in ascending order from left to right. The graphic was named after Italian economist Vilfredo Pareto.

5. The **Ishikawa diagram** helps you develop and collect hypotheses of possible cause-and-effect relationships as required in problem analysis.

6. The **box plot** includes the following five statistics – median, minimum and maximum value, first and third quartile. Changes in location and variation of several subgroups can be easily recognized. The spacing between the different parts of the box indicate the spread and skewness in the data.