Data types and useful displays

Learn and practise | Free preview

A sample from this topic. The complete topic collection contains three different resources and worked solutions.

Read the worked example, then show each step in the practice questions. Show the mathematical steps. A calculator, graphing tool or CAS may be used to check results where useful.

What you will practise

• Investigating and comparing data distributions

Useful starting skills: Year 10 algebra, percentages, statistical displays, geometry and trigonometry.

Choose a display to match the variable. Categories need separate bars; numerical measurements can be grouped into intervals in a histogram.

Nominal categories have no natural order. Ordinal categories have an order. Numerical variables are discrete counts or continuous measurements; interval and ratio scales describe whether differences and ratios are meaningful.

Worked example

Classify travel mode and travel time, and choose a display for each.

Travel modes are names without a natural ranking

time is measured and can take non-integer values.

Answer: Mode: nominal categorical/bar chart. Time: continuous numerical/histogram.

Try it yourself

Name: _____ Date: _____

1. Classify shirt size S/M/L, number of siblings and height.

2. A club records bus 12, bike 8 and walk 5. Find each relative frequency.

Answers and explanations

Check the method as well as the final answer. An alternative correct method is also valid.

1. Ordinal categorical; discrete numerical; continuous numerical.

Size categories have an order; siblings are counted; height is measured.

2. 48%, 32%, 20%.

Total=25; divide each frequency by 25.

Curriculum reference: General Mathematics Units 1–2 — Investigating and comparing data distributions

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