Summary statistics and comparing groups

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.

Describe a numerical distribution using shape, centre and spread. A mean uses every value; a median is less affected by extreme observations.

For these resources, quartiles are medians of the lower and upper halves, excluding the middle observation when the sample size is odd. State this convention when using technology.

Worked example

Find the median and IQR of 2, 4, 5, 7, 9, 13.

Median=(5+7)/2=6

Q_1=4 and Q_3=9

IQR=9-4=5.

Answer: Median 6; IQR 5.

Try it yourself

Name: _____ Date: _____

1. Find mean, median and range of 3, 5, 6, 10.

2. Find five-number summary for 1, 2, 4, 6, 8, 10, 12, 15.

Answers and explanations

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

1. Mean 6; median 5.5; range 7.

Mean=24/4; median=(5+6)/2; range=10-3.

2. 1, 3, 7, 11, 15.

Median=(6+8)/2=7; lower-half median 3, upper-half median 11.

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

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