Year 8 Statistics – Developing

ANSWER KEY HappyKids.fit

Answers and worked solutions · 10 questions

A. Use statistics

1. **Team B has the higher mean (68 against 64), so it scored better on average; team B has the smaller range (41 against 49), so its scores were more consistent.**
   Means: 384 ÷ 6 = 64; 408 ÷ 6 = 68
   Ranges: 49 and 41
   Compare an average (centrality) and the range (spread), in context

2. **Advantage: quick and easy. Disadvantage: it is likely to be biased, so it may not represent everyone.**
   Think about bias and how representative the sample is
   Advantage: quick and easy
   Disadvantage: it is likely to be biased, so it may not represent everyone

3. **a pie chart: each sector shows a part of the whole.**
   Choose: a pie chart
   Because each sector shows a part of the whole

4. **a scatter graph: it shows the relationship (correlation) between two variables.**
   Choose: a scatter graph
   Because it shows the relationship (correlation) between two variables

5. **Feb and Mar (by 20 hundred); the overall trend is increasing**
   Changes: Jan–Feb −10, Feb–Mar +20, Mar–Apr +5, Apr–May −10, May–Jun +5
   Largest rise: Feb to Mar
   From 35 to 45: increasing

6. **negative correlation: as hours of sunshine increase, visitors (tens) tends to decrease.**
   Look at how the second value changes as the first increases
   negative correlation

7. **positive correlation: as hours of sunshine increase, visitors (tens) tends to increase.**
   Look at how the second value changes as the first increases
   positive correlation

8. **median 33, range 44**
   There are 13 values, already in order
   median: 33; range: 44

9. **3 people**
   54 ÷ 360 = 3/20 of the people
   3/20 × 20 = 3

10. **140°**
    Each student is 360 ÷ 72 = 5°
    28 × 5 = 140°