

Other Summary Statistics – GCSE Statistics

1. No.7

7

The number of lambs born on each of the first 10 days in April are given.

8 11 9 14 12 14 10 15 14 13

Circle the first 4-point moving average.

[1 mark]

9.5

10.5

11

12

$$\frac{8 + 11 + 9 + 14}{4} = 10.5$$

2. No.13

13

Miss Peng sets a practice exam for her students.

There are three papers, each of which has a different weighting.

The table shows the marks scored by Anneka and the weighting for each paper.

Paper	Weighting (W)	Mark (M)
1	60	82
2	40	59
3	20	26

13 (a) Calculate the weighted mean of Anneka's marks.

[3 marks]

$$\text{Weighted mean} = \frac{\sum WM}{\sum W}$$

$$= \frac{(60 \times 82) + (40 \times 59) + (20 \times 26)}{60 + 40 + 20}$$

$$= \frac{4920 + 2360 + 520}{120} = \frac{7800}{120}$$

Answer 65

13 (b) Adam has recently joined the school.

Miss Peng decides to compare Adam's performance to the rest of the class.

She calculates his standardised scores for each paper using the formula,

$$\text{Standardised score} = \frac{(\text{value} - \text{mean})}{\text{standard deviation}}$$

13 (b) (i) In Paper 1, Adam scored 58 marks.

The class mean was 56 marks and the standard deviation was 10 marks.

Calculate Adam's standardised score for Paper 1.

Value = 58, Mean = 56, Standard deviation = 10 [2 marks]

$$\Rightarrow \text{Standardised Score} = \frac{58 - 56}{10} = \frac{2}{10} = 0.2$$

Answer 0.2

13 (b) (ii) Adam's standardised scores for Papers 2 and 3 were 0 and -0.3 respectively.

Which of the three papers did he perform best on?

Tick (✓) a box and give a reason for your answer.

[1 mark]

Paper 1

☒

Paper 2

☐

Paper 3

☐

Reason

Paper 1 had the highest Value and the highest positive standardised score.