

Neill Hamilton

CCEA

GCSE

FURTHER MATHS REVISION BOOKLET

STATISTICS



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Dedicated to Arlene, for everything she has done for me, and to Marley who is the best and most loyal friend I could ever have.



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Contents

Revision Exercise 1	3
Revision Exercise 2	10
Revision Exercise 3	17
Revision Exercise 4	23
Revision Exercise 5	29
Answers	36

Revision Exercise 1

1. Catrina recorded the number of swimming lengths in metres that she swam each day in April.

Length in metres	Number of lengths		
14	7		
15	9		
16	5		
17	8		
18	1		

Calculate the:

- (a) mean,

Answer _____ [2]

- (b) standard deviation,

Answer _____ [2]

- (c) variance.

Answer _____ [1]

2. There are 12 boys and 8 girls in a class.

The boys have a mean height of 1.48 m and a standard deviation of 1.6 m.

The girls have a mean height of 1.37 m and a standard deviation of 1.74 m.

Calculate the

- (a) mean of the heights of all the pupils in the class,

Answer _____ [2]

(b) standard deviation of the heights of all the pupils in the class,

Answer _____ [2]

(c) variance of the heights of all the pupils in the class.

Answer _____ [1]

3. The number of cards, labelled with letters, is shown in the table below.

Letter on a card	A	E	I	O	U
Number of cards	5	4	8	2	1

Steven takes 2 cards at random, without replacement.

(a) Work out the probability that both cards are labelled A or both cards are labelled E.

Answer _____ [1]

He then takes a third card at random.

(b) Work out the probability that all three cards are labelled A or all three cards are labelled E.

Answer _____ [1]

- (c) Given that both the first two cards are labelled A or both labelled E, work out the probability that all three cards are labelled A or all three cards are labelled E.

Answer _____ [2]

4. The table below shows the heights and weights of 9 objects.

Height (cm)	26	22	27	19	22	23	29	18	30
Weight (kg)	4.8	4.1	4.4	3.7	3.8	4.3	5.2	3.5	4.9
Rank (Height)									
Rank (Weight)									

- (a) Write down the rank orders for the heights and weights in the table.

[2]

- (b) Calculate Spearman's coefficient of rank correlation.

Answer _____ [2]

- (c) Interpret your answer to part (b).

Answer _____ [1]

- (d) Calculate the mean height and weight.

Answer _____ [1]