**9 AIL Targeted Teaching Mathematics - Takeaway**

**5 number Summary (Introduction to Box and Whisker Plots)**

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Advisory \_\_\_\_\_\_ TT Teacher\_\_\_\_\_\_\_\_

**T2 Teaching Example**

Find the ***five number summary*** for the following data set:

77, 79,  80,  86,  87,  87,  94,  99

*(Note: This data set is already in* ***ascending order****. If data was presented in random order the first step would be to put it in* ***ascending order****)*

1. Find the ***median***. Since there are eight data points, the median will be the average of the two middle values:

Eg

(86 + 87) ÷ 2 = 86.5 = Q2

1. Find the lower interquartile. The first half of the data is:

77, 79, 80, 86ights Reserved

***Q1*** is the ***median*** of the bottom half. Since there are four numbers it is the average of the middle two numbers.

Eg

Q1 = (79 + 80) ÷ 2 = 79.5

1. Find the upper interquartile. The last half of the data is:

87, 87, 94, 99.

***Q3*** is the ***median*** of the upper half. Since there are four numbers it is the average of the middle two numbers.

Eg
Q3 = (87 + 94) ÷ 2 = 90.5

1. The minimum value is the smallest number when the data is placed in ascending order.

Eg

**77**, 79,  80,  86,  87,  87,  94,  99

Minimum = 77

1. The maximum value is the largest number when the data is placed in ascending order.

77, 79,  80,  86,  87,  87,  94,  **99**

Maximum = 99

The ***five number summary*** for the data is:

77, 79.5, 86.5, 90.5, 99

These values can then be used to make a ***box-and-whisker plot*** (addressed in a separate tutorial):

Eg



**Touch Base Tasks:**

1. Find the five-number summary of the following data set:

79, 53,  82,  91,  87,  98,  80,  93

1. Find the five number summary of the following data set:

2, 3, 6, 8, 4, 3, 7, 5, 2

1. Find the five number summary of the following data set:

160, 147, 150, 162, 170, 143, 172, 139, 155, 160, 158, 158, 149, 151, 153, 164, 146, 158

**These tasks will be reviewed in the Tutorial Session in the next Maths Targeted Teaching Time.**