Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Chapter 5 Description Statistics SAC**

**Multiple Choices**

**The Data Below is to be used for question 1 to 2**

72 56 84 59 67 45 48 59 86 63

**1 The mean of the data is closest to:**

A. 56

B. 63

C. 65

D. 72

E. 64

**2 The standard deviation of the data is closest to:**

A. 12.4

B. 12.5

C. 13.0

D. 13.1

E. 11

**The Data below is used for Questions 3 to 5**

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1. 1 3 7
2. 0 3 4 7 8 8 9
3. 0 0 1 2 2 3 5 5 6 8 9
4. 2 4 4 5 8 9
5. 3

**3 The median for the data is:**

A. 1

B. 2

C. 18

D. 22

E. 32

**4 The IQR (interquartile range) of the data is:**

A. 13

B. 17.5

C. 22

D. 30.5

E. 43

**5 In a cross country race, the times (min) of 160 competitors were recorded as follows:**

|  |  |
| --- | --- |
| **Times (min)** | **Frequency** |
| 20 ≤ t ≤ 25 | 18 |
| 25 < t ≤ 30 | 45 |
| 30 < t ≤ 35 | 37 |
| 35 < t ≤ 40 | 33 |
| 40 < t ≤ 45 | 19 |
| 45 < t ≤ 50 | 8 |

A. The modal class is 35 < t ≤ 40

B. 19 Runners ran faster than 45 minutes

C. Exactly 60 Runners ran slower than 30 minutes

D. Only 8 runners finished the race

E. The modal class is 25 < t ≤ 30

**1) The following data represents the number of goals scored by a netball team over the course of a season**

34 56 43 12 30 32 33 45

25 30 33 54 42 26 36 18

1. **Display the data in a frequency table, using class intervals of 10-14, 15-19 etc.**

**(2 marks)**

|  |  |
| --- | --- |
|  |  |
|  |  |
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|  |  |
|  |  |
|  |  |

1. **Draw a Stem and Leaf Plot showing the data (2 marks)**

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**2) A survey of the number of children in families is completed. The results are shown below.**

3 1 4 3 2 1 1 2 3 3 2

1 1 2 2 2 3 3 4 5 3 6

1 2 2 2 4 4 2 2

1. **Construct a frequency table for these results (2 marks)**

|  |  |
| --- | --- |
|  |  |
|  |  |
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|  |  |
|  |  |
|  |  |

1. **Draw a bar chart showing that data (make sure it is labelled properly) (1 mark)**
2. **Find the mean, median and mode number of the children in a family (2 marks)**
3. **Draw a box plot for the data set (5 marks)**

**3. Below is the table of scores attained by kids who did push ups in 2 minutes**

|  |  |
| --- | --- |
| **Score** | **Frequency** |
| 10-14 | 4 |
| 15-19 | 12 |
| 20-24 | 18 |
| 25-29 | 10 |
| 30-34 | 7 |

1. **Find the modal class, median and the mean for the grouped discrete data set**

**(3 marks)**

1. **Determine the Standard Deviation of the data set (1 mark)**

**5) For the data set below, determine the degree of skewness using formula (BONUS)**

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2 1, 4, 5, 7

3 0, 4, 6, 8, 8

4 1, 1, 2, 7, 9

5 0, 0, 1, 2, 3

6 1, 2

**CASE STUDY**

Mr. Peters administrated a General Math test to South Oakleigh students of Class 11G. The cumulative frequency of the graph was generated and handed into the maths coordinator as below. Mr. Peters’ computer crash and he lost the original result. The coordinator is demanding some extra information about the student marks. CAN YOU HELP HIM!!!

1. **Fill Out the Table below (5marks)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Marks (x)** | **Cumulative Frequency of marks (cf)** | **Frequency of Marks (f)** | **xf** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
| **Total** |  |  |  |

**Below are the Questions that must be passed up to the Math Coordinator.**

1. **How many students had a mark of 25? (1 mark)**
2. **How many students had a score 31 and below? (1 mark)**
3. **What was the percentage of students who scored below above 28? (2 marks)**
4. **What is the mean of the data set? (1mark)**
5. **Draw the Box Plot of the Data Set using the line below(5mark)**
6. **What type of Skew is the box plot? (1 mark)**