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| Year  9 | | Mathematics Test  Basic Statistics | | Calculator Section |
| Short Answer Section | Name : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |
|  | Write all working and answers in the spaces provided on this test paper. | | | |
| 1. | Twelve students score the following marks on a test out of 25:  16, 24, 25, 17, 12 18, 11, 16, 14, 23, 20 and 21.  Find the median of the marks.  ..........................................................................................................................................................  .......................................................................................................................................................... | | | |
| 2. | Rose spends some time each week doing casual work. The number of hours per week that she worked over the last 8 weeks is given below.  23, 15, 26, 24, 30, 15, 18, and 19.  Find the mean (average) number of hours that she worked each week.  ..........................................................................................................................................................    .......................................................................................................................................................... | | | |
| 3. | The Demons Aussie rules team scored the following number of goals in their last 15 games.  15, 26, 12, 25, 24 15, 17, 15, 18, 21, 15, 26, 12, 15 and 19.  What is the range of the number of goals?  ..........................................................................................................................................................    .......................................................................................................................................................... | | | |
| 4. | Yania works in a shoe store. Her boss asked her to find the modal shoe size sold in each category on a given day. The adult male sizes sold were:  8, 11, 10, 9½, 9, 8½, 10, 12, 10½, 9, 9½, 12, 7, 8½, 9½, 10, 9½, 7  What is the mode of the adult male shoe sizes?  ..........................................................................................................................................................    .......................................................................................................................................................... | | | |
| 5. | The areas planted to various crops in the Mannering district are shown on the sector graph.  Which crop comprised 20% of the total area?  ...........................................................................    ........................................................................... | | | |
| **Questions 6 and 7 refer to the dot plot below.** | | | | |
|  | The graph shows the number of children living in each dwelling in a housing division.     |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | |  |  |  | O |  |  |  | |  |  |  | O |  |  |  | |  |  |  | O | O |  | O | |  |  | O | O | O | O | O | |  | O | O | O | O | O | O | |  | 0 | 1 | 2 | 3 | 4 | 5 |   Number of Children | | | |
| 6. | What is the median number of children in each dwelling?  .......................................................................................................................................................... | | | |
| 7. | What is the mean number of children in each dwelling?  .......................................................................................................................................................... | | | |
| **Questions 8 – 10 refer to the stem and leaf plot below.** | | | | |
|  | The plot shows the number of runs scored by a batter in her last 20 games.     |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Stem | Leaves | | | | | | | | | 0 | 8 | 9 |  |  |  |  |  |  | | 1 | 0 | 4 | 5 | 7 |  |  |  |  | | 2 | 3 | 5 | 7 | 8 | 9 | 9 |  |  | | 3 | 0 | 2 | 4 | 4 | 8 |  |  |  | | 4 | 2 | 6 | 9 |  |  |  |  |  | | | | |
| 8. | What percentage of her scores were higher than 40?  .......................................................................................................................................................... | | | |
| 9. | What was the median of her scores?  .......................................................................................................................................................... | | | |
| 10. | What was the mean of her scores?  .......................................................................................................................................................... | | | |

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| Year  9 | | Mathematics Test  Basic Statistics | | Calculator Allowed |
| Multiple Choice Section | Name : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |
|  | Mark all your answers on the accompanying multiple choice answer sheet, not on this test paper. You may do any working out on this test paper. Calculators are allowed for this section. | | | |
| 1. | Lloyd has 12 hens which have a total mass of 180 kg. From this information, which statistical measure could you find about the hens?  A. the mean. B. the median. C. the mode. D. the range. | | | |
| 2. | Dianna records the points scored by the players in an indoor cricket competition. The mode of the data is:  A. 7 B. 8.1  C. 8 D. 9 | | | |
| **Questions 3 and 4 refer to the following**.  The graph shows the results of a survey on how young people communicated. | | | | |
| 3. | What was the second most popular method of communication?  A. Email B. Mail C. Phone D. Social Media | | | |
| 4. | What percentage of those surveyed chose social media.  A. 25% B. 30% C. 35% D. 40% | | | |
| **Questions 5 – 7 refer to the frequency distribution table below.** | | | | |
| 5. | What is the mode of the scores?  A. 5 B. 5.5 C. 6 D. 7 | | | |
| 6. | What is the median of the scores?  A. 5 B. 5.5 C. 6 D. 7 | | | |
| 7. | What is the mean of the scores (correct to one decimal place)?  A. 5.2 B. 5.4 C. 5.5 D. 5.6 | | | |
| 8. | Therese calculated the mean, median, mode and range of the ages (to the nearest year) of her five cousins.   |  |  | | --- | --- | | Mean | 5 | | Median | 6 | | Mode | 7 | | Range | 5 |   Which of these could have been her cousins’ ages?  A. 3, 5, 6, 7, 7 B. 2, 4, 6, 6, 7 C. 2, 3, 6, 7, 7 D. 1, 3, 6, 7, 7 | | | |
| 9. | Heather records the marks of twenty five students in the stem and leaf plot.   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Stem | Leaves | | | | | | | | | 3 | 2 | 3 | 6 |  |  |  |  |  | | 4 | 1 | 3 | 3 | 3 | 3 | 8 |  |  | | 5 | 1 | 2 | 5 | 5 | 5 | 7 | 8 |  | | 6 | 0 | 4 | 5 | 7 | 8 | 9 |  |  | | 7 | 2 | 6 | 9 |  |  |  |  |  |   She realises that she has left out a score of 43.  Which will change when she includes the extra score?  A. the mean. B. the median. C. the mode. D. the range. | | | |
| 10. | The scores below have a mean of 26.  18, 23, 25, 27, 27, 28, 30, 30  Which of the changes to the scores would change the mean to 25?  A. change 25 to 26 B. change 30 to 38  C. change 30 to 22 D. change 27 to 25 | | | |

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| Year  9 | Mathematics Test  Basic Statistics | |  |
| Multiple Choice  Answer Sheet | Name : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |

Completely fill the response oval representing the most correct answer.

1. A B C D

2. A B C D

3. A B C D

4. A B C D

5. A B C D

6. A B C D

7. A B C D

8. A B C D

9. A B C D

10. A B C D

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|  | Mathematics Test  Basic Statistics |
| Answer Sheet |

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| Short Answer | |
| 1 | 17.5 |
| 2 | 21.25 |
| 3 | 14 |
| 4 | 9.5 |
| 5 | Cane is 20% |
| 6 | 2.5 |
| 7 | 2.75 |
| 8 | 15% |
| 9 | 28.5 |
| 10 | 24.95 |

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| Multiple Choice | |
| 1 | A |
| 2 | D |
| 3 | D |
| 4 | B |
| 5 | A |
| 6 | B |
| 7 | D |
| 8 | C |
| 9 | A |
| 10 | C |