**Comparing Data Using Cumulative Frequency Graphs**

**Wordsearch versus Sudoku**

Record the time it takes to find all the words listed in the **wordsearch** below.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| S | G | T | E | G | A | R | E | V | A | G | B | D | V |
| E | Y | R | T | R | P | T | E | Z | W | A | C | T | G |
| L | P | G | A | A | S | R | E | P | P | U | Q | O | R |
| I | U | I | D | P | O | C | P | A | M | B | S | D | O |
| T | L | D | F | A | H | S | G | U | E | H | I | J | U |
| R | S | E | F | L | T | T | L | G | D | P | H | D | P |
| A | J | K | O | Y | L | A | W | F | I | Z | X | A | E |
| U | K | W | L | Z | T | T | X | R | A | N | G | E | D |
| Q | E | C | Q | I | V | I | B | N | N | M | T | R | Q |
| R | C | V | V | B | N | S | M | Q | W | E | A | P | V |
| E | R | E | W | J | E | T | R | T | Y | U | B | S | I |
| T | R | T | I | O | A | I | S | G | K | H | L | U | L |
| N | K | O | D | X | Y | C | N | E | U | Q | E | R | F |
| I | P | Y | U | N | D | S | F | Z | H | J | X | M | C |

|  |  |  |  |
| --- | --- | --- | --- |
| STATISTICS | CUMULATIVE | FREQUENCY | MEDIAN |
| INTERQUARTILE | RANGE | UPPER | LOWER |
| TABLE | DATA | AVERAGE | SPREAD |
| GROUPED | GRAPH |  |  |

Time taken to complete wordsearch \_\_\_\_\_\_ min \_\_\_\_\_\_ sec

Record the time you take to complete the sudoku puzzle below. Each row, column and 3x3 square must contain each of the numbers 1 to 9 once only.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 7 |  |  | 1 | 5 |  |  | 4 |
| 5 | 8 | 4 | 7 | 3 |  | 2 | 1 | 9 |
| 6 |  |  |  | 4 | 9 |  | 8 | 7 |
| 7 |  | 5 |  |  |  | 6 | 4 |  |
|  | 9 |  | 4 | 2 | 8 |  | 3 |  |
|  | 3 | 8 | 5 | 6 |  |  |  | 2 |
| 3 | 5 |  | 9 | 8 |  |  |  | 6 |
| 9 | 4 |  | 6 | 5 | 2 | 8 | 7 |  |
|  | 6 |  | 3 | 7 | 4 |  | 5 |  |

Time taken to complete sudoku \_\_\_\_\_\_ min \_\_\_\_\_\_ sec

**Wordsearch Data**

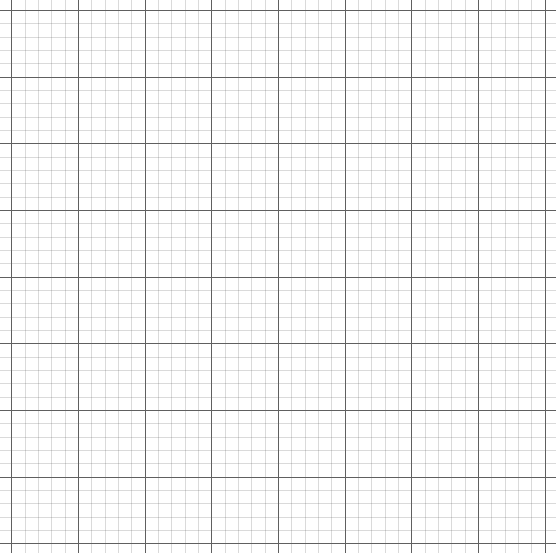
**1.** Complete a grouped frequency table, then find the cumulative frequencies.

|  |  |  |
| --- | --- | --- |
| Time (minutes) | Frequency | Cumulative Frequency |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

**3.** Find the median, lower quartile, upper quartile and interquartile range (IQR) for the wordsearch data from the cumulative frequency graph.

|  |  |
| --- | --- |
| Median |  |
| Lower Quartile |  |
| Upper Quartile |  |
| Interquartile Range |  |

**2.** Plot a cumulative frequency graph.



**Sudoku Data**

**1.** Complete a grouped frequency table, then find the cumulative frequencies.

|  |  |  |
| --- | --- | --- |
| Time (minutes) | Frequency | Cumulative Frequency |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

**3.** Find the median, lower quartile, upper quartile and interquartile range (IQR) for the wordsearch data from the cumulative frequency graph.

|  |  |
| --- | --- |
| Median |  |
| Lower Quartile |  |
| Upper Quartile |  |
| Interquartile Range |  |

**2.** Plot a cumulative frequency graph.

