## Task1 Q1: Import Data

### The CONTENTS Procedure

| | | | |
|---|---|---|---|
| **Data Set Name** | WORK.COASTER1 | **Observations** | 200 |
| **Member Type** | DATA | **Variables** | 11 |
| **Engine** | V9 | **Indexes** | 0 |
| **Created** | 05/03/2022 17:42:42 | **Observation Length** | 176 |
| **Last Modified** | 05/03/2022 17:42:42 | **Deleted Observations** | 0 |
| **Protection** | | **Compressed** | NO |
| **Data Set Type** | | **Sorted** | YES |
| **Label** | | | |
| **Data Representation** | SOLARIS_X86_64, LINUX_X86_64, ALPHA_TRU64, LINUX_IA64 | | |
| **Encoding** | utf-8 Unicode (UTF-8) | | |

| Engine/Host Dependent Information | |
|---|---|
| **Data Set Page Size** | 131072 |
| **Number of Data Set Pages** | 1 |
| **First Data Page** | 1 |
| **Max Obs per Page** | 743 |
| **Obs in First Data Page** | 200 |
| **Number of Data Set Repairs** | 0 |
| **Filename** | /saswork/SAS_work6538000164E9_odaws02-usw2-2.oda.sas.com/SAS_workF9A0000164E9_odaws02-usw2-2.oda.sas.com/coaster1.sas7bdat |
| **Release Created** | 9.0401M6 |
| **Host Created** | Linux |
| **Inode Number** | 671090291 |
| **Access Permission** | rw-r--r-- |
| **Owner Name** | u61397358 |
| **File Size** | 256KB |
| **File Size (bytes)** | 262144 |

| Alphabetic List of Variables and Attributes | | | | | |
|---|---|---|---|---|---|
| **#** | **Variable** | **Type** | **Len** | **Format** | **Informat** |
| 6 | Drop | Num | 8 | BEST12. | BEST32. |
| 8 | Duration | Num | 8 | BEST12. | BEST32. |
| 5 | Height | Num | 8 | BEST12. | BEST32. |
| 9 | Inversions | Num | 8 | BEST12. | BEST32. |
| 7 | Length | Num | 8 | BEST12. | BEST32. |
| 1 | Name | Char | 78 | $78. | $78. |
| 2 | Park | Char | 30 | $30. | $30. |
| 4 | Speed | Num | 8 | BEST12. | BEST32. |
| 11 | SpeedGroup | Char | 6 | $6. | $6. |
| 3 | Track | Char | 5 | $5. | $5. |
| 10 | Type | Num | 8 | BEST12. | BEST32. |

| Sort Information | |
|---|---|
| **Sortedby** | Duration |
| **Validated** | YES |
| **Character Set** | ASCII |

## Task2 Q6: Summary Statistics

### The MEANS Procedure

**Duration=.**

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 55.6131148 | 52.8000000 | 25.0938935 | 28.0000000 | 61 | 0 |
| Height | 119.5155738 | 102.0000000 | 83.9023110 | 95.0000000 | 61 | 0 |
| Drop | 168.9804348 | 150.0000000 | 90.3440982 | 128.1000000 | 23 | 38 |
| Length | 2215.63 | 1775.00 | 1618.74 | 1763.20 | 61 | 0 |
| Inversions | 0.5245902 | 1.0000000 | 0.5035394 | 1.0000000 | 61 | 0 |
| Type | 0.9180328 | 1.0000000 | 0.2765913 | 0 | 61 | 0 |

**Duration=28**

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 100.0000000 | 100.0000000 | . | 0 | 1 | 0 |
| Height | 377.3300000 | 377.3300000 | . | 0 | 1 | 0 |
| Drop | 328.1000000 | 328.1000000 | . | 0 | 1 | 0 |
| Length | 1235.00 | 1235.00 | . | 0 | 1 | 0 |
| Inversions | 0 | 0 | . | 0 | 1 | 0 |
| Type | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |

**Duration=45**

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 43.5000000 | 43.5000000 | . | 0 | 1 | 0 |
| Height | 82.0000000 | 82.0000000 | . | 0 | 1 | 0 |
| Drop | . | . | . | . | 0 | 1 |
| Length | 1263.10 | 1263.10 | . | 0 | 1 | 0 |
| Inversions | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |
| Type | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |

**Duration=47**

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 43.5000000 | 43.5000000 | . | 0 | 1 | 0 |
| Height | 49.3000000 | 49.3000000 | . | 0 | 1 | 0 |
| Drop | . | . | . | . | 0 | 1 |
| Length | 1036.80 | 1036.80 | . | 0 | 1 | 0 |
| Inversions | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |
| Type | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |

**Duration=48**

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 25.7000000 | 25.7000000 | . | 0 | 1 | 0 |
| Height | 50.0000000 | 50.0000000 | . | 0 | 1 | 0 |
| Drop | . | . | . | . | 0 | 1 |
| Length | 1282.80 | 1282.80 | . | 0 | 1 | 0 |
| Inversions | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |
| Type | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |

**Duration=50**

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 65.3000000 | 65.3000000 | 0 | 0 | 4 | 0 |
| Height | 151.6000000 | 151.6000000 | 0 | 0 | 4 | 0 |
| Drop | . | . | . | . | 0 | 4 |
| Length | 492.2000000 | 492.2000000 | 0 | 0 | 4 | 0 |
| Inversions | 1.0000000 | 1.0000000 | 0 | 0 | 4 | 0 |
| Type | 1.0000000 | 1.0000000 | 0 | 0 | 4 | 0 |

**Duration=60**

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 49.2000000 | 52.0000000 | 18.1089757 | 24.3000000 | 5 | 0 |
| Height | 106.7200000 | 100.0000000 | 47.9069097 | 57.6000000 | 5 | 0 |
| Drop | 66.0000000 | 66.0000000 | . | 0 | 1 | 4 |
| Length | 1127.54 | 984.3000000 | 793.7381357 | 753.8000000 | 5 | 0 |
| Inversions | 0.8000000 | 1.0000000 | 0.4472136 | 0 | 5 | 0 |
| Type | 1.0000000 | 1.0000000 | 0 | 0 | 5 | 0 |

**Duration=62**

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 82.0000000 | 82.0000000 | . | 0 | 1 | 0 |
| Height | 205.0000000 | 205.0000000 | . | 0 | 1 | 0 |
| Drop | 130.0000000 | 130.0000000 | . | 0 | 1 | 0 |
| Length | 2202.00 | 2202.00 | . | 0 | 1 | 0 |
| Inversions | 0 | 0 | . | 0 | 1 | 0 |
| Type | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |

**Duration=65**

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 50.0000000 | 50.0000000 | . | 0 | 1 | 0 |
| Height | 95.0000000 | 95.0000000 | . | 0 | 1 | 0 |
| Drop | . | . | . | . | 0 | 1 |
| Length | 2100.00 | 2100.00 | . | 0 | 1 | 0 |
| Inversions | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |
| Type | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |

**Duration=66**

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 45.0000000 | 45.0000000 | . | 0 | 1 | 0 |
| Height | 56.0000000 | 56.0000000 | . | 0 | 1 | 0 |
| Drop | 47.0000000 | 47.0000000 | . | 0 | 1 | 0 |
| Length | 635.0000000 | 635.0000000 | . | 0 | 1 | 0 |
| Inversions | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |
| Type | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |

**Duration=68**

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 22.4000000 | 22.4000000 | . | 0 | 1 | 0 |
| Height | 36.4000000 | 36.4000000 | . | 0 | 1 | 0 |
| Drop | . | . | . | . | 0 | 1 |
| Length | 984.3000000 | 984.3000000 | . | 0 | 1 | 0 |
| Inversions | 0 | 0 | . | 0 | 1 | 0 |
| Type | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |

**Duration=70**

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 28.0000000 | 28.0000000 | . | 0 | 1 | 0 |
| Height | 49.3000000 | 49.3000000 | . | 0 | 1 | 0 |
| Drop | . | . | . | . | 0 | 1 |
| Length | 1213.90 | 1213.90 | . | 0 | 1 | 0 |
| Inversions | 0 | 0 | . | 0 | 1 | 0 |
| Type | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |

**Duration=73**

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 45.0000000 | 45.0000000 | . | 0 | 1 | 0 |
| Height | 90.0000000 | 90.0000000 | . | 0 | 1 | 0 |
| Drop | . | . | . | . | 0 | 1 |
| Length | 1300.00 | 1300.00 | . | 0 | 1 | 0 |
| Inversions | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |
| Type | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |

### Duration=75

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 46.0000000 | 47.0000000 | 9.5393920 | 19.0000000 | 3 | 0 |
| Height | 72.9333333 | 80.0000000 | 14.9135285 | 27.2000000 | 3 | 0 |
| Drop | 75.0000000 | 75.0000000 | 0 | 0 | 2 | 1 |
| Length | 2034.27 | 1942.00 | 674.3508088 | 1339.20 | 3 | 0 |
| Inversions | 0.3333333 | 0 | 0.5773503 | 1.0000000 | 3 | 0 |
| Type | 0.6666667 | 1.0000000 | 0.5773503 | 1.0000000 | 3 | 0 |

### Duration=80

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 48.1500000 | 48.1500000 | 15.3442172 | 21.7000000 | 2 | 0 |
| Height | 82.8000000 | 82.8000000 | 45.2548340 | 64.0000000 | 2 | 0 |
| Drop | . | . | . | . | 0 | 2 |
| Length | 1925.90 | 1925.90 | 756.3214132 | 1069.60 | 2 | 0 |
| Inversions | 0.5000000 | 0.5000000 | 0.7071068 | 1.0000000 | 2 | 0 |
| Type | 1.0000000 | 1.0000000 | 0 | 0 | 2 | 0 |

### Duration=85

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 28.0000000 | 28.0000000 | 0 | 0 | 2 | 0 |
| Height | 45.9000000 | 45.9000000 | 0 | 0 | 2 | 0 |
| Drop | . | . | . | . | 0 | 2 |
| Length | 1213.90 | 1213.90 | 0 | 0 | 2 | 0 |
| Inversions | 0 | 0 | 0 | 0 | 2 | 0 |
| Type | 1.0000000 | 1.0000000 | 0 | 0 | 2 | 0 |

### Duration=87

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 68.0000000 | 68.0000000 | . | 0 | 1 | 0 |
| Height | 107.0000000 | 107.0000000 | . | 0 | 1 | 0 |
| Drop | 162.0000000 | 162.0000000 | . | 0 | 1 | 0 |
| Length | 2937.00 | 2937.00 | . | 0 | 1 | 0 |
| Inversions | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |
| Type | 0 | 0 | . | 0 | 1 | 0 |

### Duration=90

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 48.8000000 | 50.0000000 | 8.3901728 | 7.1000000 | 9 | 0 |
| Height | 98.0555556 | 105.0000000 | 32.8461227 | 55.8000000 | 9 | 0 |
| Drop | 116.5000000 | 116.5000000 | 30.4055916 | 43.0000000 | 2 | 7 |
| Length | 1689.71 | 1624.00 | 682.9017873 | 928.5000000 | 9 | 0 |
| Inversions | 0.7777778 | 1.0000000 | 0.4409586 | 0 | 9 | 0 |
| Type | 0.8888889 | 1.0000000 | 0.3333333 | 0 | 9 | 0 |

### Duration=92

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 57.3500000 | 65.6000000 | 15.1459235 | 11.9000000 | 6 | 0 |
| Height | 155.5666667 | 191.5500000 | 59.8420142 | 73.8000000 | 6 | 0 |
| Drop | 163.9600000 | 177.0000000 | 29.1583264 | 0 | 5 | 1 |
| Length | 1414.00 | 1204.00 | 509.5582440 | 9.9000000 | 6 | 0 |
| Inversions | 0.8333333 | 1.0000000 | 0.4082483 | 0 | 6 | 0 |
| Type | 1.0000000 | 1.0000000 | 0 | 0 | 6 | 0 |

### Duration=94

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 28.0000000 | 28.0000000 | . | 0 | 1 | 0 |
| Height | 49.3000000 | 49.3000000 | . | 0 | 1 | 0 |
| Drop | . | . | . | . | 0 | 1 |
| Length | 1213.90 | 1213.90 | . | 0 | 1 | 0 |
| Inversions | 0 | 0 | . | 0 | 1 | 0 |
| Type | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |

### Duration=95

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 35.0000000 | 35.0000000 | . | 0 | 1 | 0 |
| Height | 51.8000000 | 51.8000000 | . | 0 | 1 | 0 |
| Drop | 49.8000000 | 49.8000000 | . | 0 | 1 | 0 |
| Length | 1312.30 | 1312.30 | . | 0 | 1 | 0 |
| Inversions | 0 | 0 | . | 0 | 1 | 0 |
| Type | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |

### Duration=96

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 49.7000000 | 49.7000000 | . | 0 | 1 | 0 |
| Height | 109.3000000 | 109.3000000 | . | 0 | 1 | 0 |
| Drop | . | . | . | . | 0 | 1 |
| Length | 2260.50 | 2260.50 | . | 0 | 1 | 0 |
| Inversions | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |
| Type | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |

### Duration=100

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 38.2000000 | 38.2000000 | 16.2634560 | 23.0000000 | 2 | 0 |
| Height | 91.9000000 | 91.9000000 | 78.9131168 | 111.6000000 | 2 | 0 |
| Drop | 114.8000000 | 114.8000000 | . | 0 | 1 | 1 |
| Length | 946.5500000 | 946.5500000 | 99.7727668 | 141.1000000 | 2 | 0 |
| Inversions | 0.5000000 | 0.5000000 | 0.7071068 | 1.0000000 | 2 | 0 |
| Type | 1.0000000 | 1.0000000 | 0 | 0 | 2 | 0 |

### Duration=105

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 46.6666667 | 50.0000000 | 5.7735027 | 10.0000000 | 3 | 0 |
| Height | 72.3333333 | 78.0000000 | 15.3079500 | 29.0000000 | 3 | 0 |
| Drop | 67.3333333 | 72.0000000 | 13.6137186 | 26.0000000 | 3 | 0 |
| Length | 2856.00 | 2650.00 | 438.8940647 | 802.0000000 | 3 | 0 |
| Inversions | 0 | 0 | 0 | 0 | 3 | 0 |
| Type | 0 | 0 | 0 | 0 | 3 | 0 |

### Duration=108

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 52.3250000 | 47.0000000 | 7.3962829 | 13.3000000 | 8 | 0 |
| Height | 129.4875000 | 123.9000000 | 16.6444703 | 21.3000000 | 8 | 0 |
| Drop | 125.7800000 | 124.6700000 | 1.9225764 | 3.3300000 | 3 | 5 |
| Length | 1559.40 | 935.0000000 | 862.5881106 | 1624.10 | 8 | 0 |
| Inversions | 0.7500000 | 1.0000000 | 0.4629100 | 0.5000000 | 8 | 0 |
| Type | 1.0000000 | 1.0000000 | 0 | 0 | 8 | 0 |

**Duration=112**

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 52.8000000 | 52.8000000 | 13.1521861 | 18.6000000 | 2 | 0 |
| Height | 103.3500000 | 103.3500000 | 53.3865620 | 75.5000000 | 2 | 0 |
| Drop | . | . | . | . | 0 | 2 |
| Length | 2460.60 | 2460.60 | 1159.94 | 1640.40 | 2 | 0 |
| Inversions | 0.5000000 | 0.5000000 | 0.7071068 | 1.0000000 | 2 | 0 |
| Type | 1.0000000 | 1.0000000 | 0 | 0 | 2 | 0 |

**Duration=120**

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 53.6750000 | 53.9000000 | 8.6791622 | 6.2000000 | 8 | 0 |
| Height | 107.9500000 | 100.0000000 | 41.1916080 | 15.5000000 | 8 | 0 |
| Drop | 106.4333333 | 95.0000000 | 45.1593475 | 10.0000000 | 6 | 2 |
| Length | 3050.06 | 2900.00 | 1017.46 | 1123.90 | 8 | 0 |
| Inversions | 0.6250000 | 1.0000000 | 0.5175492 | 1.0000000 | 8 | 0 |
| Type | 0.8750000 | 1.0000000 | 0.3535534 | 0 | 8 | 0 |

**Duration=125**

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 55.2000000 | 55.0000000 | 0.4472136 | 0 | 5 | 0 |
| Height | 112.4000000 | 115.0000000 | 5.8137767 | 0 | 5 | 0 |
| Drop | 94.6000000 | 95.0000000 | 0.8944272 | 0 | 5 | 0 |
| Length | 2170.00 | 2170.00 | 0 | 0 | 5 | 0 |
| Inversions | 1.0000000 | 1.0000000 | 0 | 0 | 5 | 0 |
| Type | 1.0000000 | 1.0000000 | 0 | 0 | 5 | 0 |

**Duration=126**

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 54.7000000 | 54.7000000 | . | 0 | 1 | 0 |
| Height | 104.3000000 | 104.3000000 | . | 0 | 1 | 0 |
| Drop | . | . | . | . | 0 | 1 |
| Length | 2805.10 | 2805.10 | . | 0 | 1 | 0 |
| Inversions | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |
| Type | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |

**Duration=130**

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 51.4714286 | 49.7000000 | 4.6867595 | 0 | 7 | 0 |
| Height | 112.0428571 | 108.3000000 | 9.9026692 | 0 | 7 | 0 |
| Drop | 95.2000000 | 95.2000000 | 0 | 0 | 6 | 1 |
| Length | 2897.00 | 2624.70 | 720.4380820 | 0 | 7 | 0 |
| Inversions | 1.0000000 | 1.0000000 | 0 | 0 | 7 | 0 |
| Type | 1.0000000 | 1.0000000 | 0 | 0 | 7 | 0 |

**Duration=133**

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 53.0000000 | 53.0000000 | . | 0 | 1 | 0 |
| Height | 100.0000000 | 100.0000000 | . | 0 | 1 | 0 |
| Drop | 95.0000000 | 95.0000000 | . | 0 | 1 | 0 |
| Length | 4230.00 | 4230.00 | . | 0 | 1 | 0 |
| Inversions | 0 | 0 | . | 0 | 1 | 0 |
| Type | 0 | 0 | . | 0 | 1 | 0 |

**Duration=135**

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 58.5250000 | 66.0000000 | 19.9090222 | 22.9500000 | 4 | 0 |
| Height | 104.4250000 | 102.5000000 | 52.3767362 | 71.1500000 | 4 | 0 |
| Drop | 155.3333333 | 151.0000000 | 52.6339561 | 105.0000000 | 3 | 1 |
| Length | 3489.98 | 3850.00 | 1494.75 | 1902.05 | 4 | 0 |
| Inversions | 0.2500000 | 0 | 0.5000000 | 0.5000000 | 4 | 0 |
| Type | 0.7500000 | 1.0000000 | 0.5000000 | 0.5000000 | 4 | 0 |

**Duration=136**

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 66.0000000 | 66.0000000 | . | 0 | 1 | 0 |
| Height | 120.0000000 | 120.0000000 | . | 0 | 1 | 0 |
| Drop | 155.0000000 | 155.0000000 | . | 0 | 1 | 0 |
| Length | 3073.00 | 3073.00 | . | 0 | 1 | 0 |
| Inversions | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |
| Type | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |

**Duration=140**

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 68.0000000 | 68.0000000 | . | 0 | 1 | 0 |
| Height | 173.0000000 | 173.0000000 | . | 0 | 1 | 0 |
| Drop | 155.0000000 | 155.0000000 | . | 0 | 1 | 0 |
| Length | 3800.00 | 3800.00 | . | 0 | 1 | 0 |
| Inversions | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |
| Type | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |

**Duration=143**

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 66.0000000 | 66.0000000 | . | 0 | 1 | 0 |
| Height | 127.0000000 | 127.0000000 | . | 0 | 1 | 0 |
| Drop | 147.0000000 | 147.0000000 | . | 0 | 1 | 0 |
| Length | 4650.00 | 4650.00 | . | 0 | 1 | 0 |
| Inversions | 0 | 0 | . | 0 | 1 | 0 |
| Type | 0 | 0 | . | 0 | 1 | 0 |

**Duration=146**

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 69.0000000 | 69.0000000 | 5.6568542 | 8.0000000 | 2 | 0 |
| Height | 179.5000000 | 179.5000000 | 0 | 0 | 2 | 0 |
| Drop | 145.2500000 | 145.2500000 | 30.0520382 | 42.5000000 | 2 | 0 |
| Length | 5080.00 | 5080.00 | 0 | 0 | 2 | 0 |
| Inversions | 0 | 0 | 0 | 0 | 2 | 0 |
| Type | 0 | 0 | 0 | 0 | 2 | 0 |

**Duration=148**

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 55.9000000 | 55.9000000 | . | 0 | 1 | 0 |
| Height | 131.3000000 | 131.3000000 | . | 0 | 1 | 0 |
| Drop | . | . | . | . | 0 | 1 |
| Length | 3937.00 | 3937.00 | . | 0 | 1 | 0 |
| Inversions | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |
| Type | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |

**Duration=150**

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 63.2000000 | 62.5500000 | 5.3426245 | 3.1000000 | 12 | 0 |
| Height | 133.3666667 | 124.8500000 | 34.5611009 | 35.0000000 | 12 | 0 |
| Drop | 127.5555556 | 115.0000000 | 42.3057653 | 52.0000000 | 9 | 3 |
| Length | 3875.68 | 3851.00 | 672.1629751 | 775.4000000 | 12 | 0 |
| Inversions | 0.5000000 | 0.5000000 | 0.5222330 | 1.0000000 | 12 | 0 |
| Type | 0.5833333 | 1.0000000 | 0.5149287 | 1.0000000 | 12 | 0 |

**Duration=155**

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 66.5000000 | 66.5000000 | 14.8492424 | 21.0000000 | 2 | 0 |
| Height | 174.0000000 | 174.0000000 | 48.0832611 | 68.0000000 | 2 | 0 |
| Drop | 167.0000000 | 167.0000000 | 76.3675324 | 108.0000000 | 2 | 0 |
| Length | 4379.50 | 4379.50 | 1443.20 | 2041.00 | 2 | 0 |
| Inversions | 0.5000000 | 0.5000000 | 0.7071068 | 1.0000000 | 2 | 0 |
| Type | 1.0000000 | 1.0000000 | 0 | 0 | 2 | 0 |

**Duration=160**

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 59.0400000 | 67.0000000 | 11.3634502 | 20.4000000 | 5 | 0 |
| Height | 150.0000000 | 167.0000000 | 43.4396133 | 65.0000000 | 5 | 0 |
| Drop | 152.6666667 | 150.0000000 | 10.2632029 | 20.0000000 | 3 | 2 |
| Length | 3647.12 | 4124.00 | 1003.26 | 1578.70 | 5 | 0 |
| Inversions | 1.0000000 | 1.0000000 | 0 | 0 | 5 | 0 |
| Type | 1.0000000 | 1.0000000 | 0 | 0 | 5 | 0 |

**Duration=163**

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 80.0000000 | 80.0000000 | . | 0 | 1 | 0 |
| Height | 209.0000000 | 209.0000000 | . | 0 | 1 | 0 |
| Drop | 225.0000000 | 225.0000000 | . | 0 | 1 | 0 |
| Length | 5843.00 | 5843.00 | . | 0 | 1 | 0 |
| Inversions | 0 | 0 | . | 0 | 1 | 0 |
| Type | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |

**Duration=165**

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 93.0000000 | 93.0000000 | . | 0 | 1 | 0 |
| Height | 310.0000000 | 310.0000000 | . | 0 | 1 | 0 |
| Drop | 300.0000000 | 300.0000000 | . | 0 | 1 | 0 |
| Length | 6595.00 | 6595.00 | . | 0 | 1 | 0 |
| Inversions | 0 | 0 | . | 0 | 1 | 0 |
| Type | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |

**Duration=180**

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 70.5266667 | 71.5000000 | 11.2478866 | 17.0000000 | 15 | 0 |
| Height | 184.9800000 | 166.0000000 | 54.5713059 | 80.0000000 | 15 | 0 |
| Drop | 190.6307692 | 196.0000000 | 58.1076069 | 69.0000000 | 13 | 2 |
| Length | 4444.17 | 4500.00 | 992.9423404 | 1582.00 | 15 | 0 |
| Inversions | 0.3333333 | 0 | 0.4879500 | 1.0000000 | 15 | 0 |
| Type | 0.9333333 | 1.0000000 | 0.2581989 | 0 | 15 | 0 |

### Duration=190

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 67.0000000 | 67.0000000 | . | 0 | 1 | 0 |
| Height | 195.0000000 | 195.0000000 | . | 0 | 1 | 0 |
| Drop | 170.0000000 | 170.0000000 | . | 0 | 1 | 0 |
| Length | 3828.00 | 3828.00 | . | 0 | 1 | 0 |
| Inversions | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |
| Type | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |

### Duration=193

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 65.0000000 | 65.0000000 | . | 0 | 1 | 0 |
| Height | 161.0000000 | 161.0000000 | . | 0 | 1 | 0 |
| Drop | 155.0000000 | 155.0000000 | . | 0 | 1 | 0 |
| Length | 5427.00 | 5427.00 | . | 0 | 1 | 0 |
| Inversions | 0 | 0 | . | 0 | 1 | 0 |
| Type | 0 | 0 | . | 0 | 1 | 0 |

### Duration=195

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 65.0000000 | 65.0000000 | . | 0 | 1 | 0 |
| Height | 150.0000000 | 150.0000000 | . | 0 | 1 | 0 |
| Drop | 150.0000000 | 150.0000000 | . | 0 | 1 | 0 |
| Length | 3937.00 | 3937.00 | . | 0 | 1 | 0 |
| Inversions | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |
| Type | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |

### Duration=200

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 73.0000000 | 73.0000000 | . | 0 | 1 | 0 |
| Height | 208.0000000 | 208.0000000 | . | 0 | 1 | 0 |
| Drop | 205.0000000 | 205.0000000 | . | 0 | 1 | 0 |
| Length | 5400.00 | 5400.00 | . | 0 | 1 | 0 |
| Inversions | 0 | 0 | . | 0 | 1 | 0 |
| Type | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |

### Duration=205

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|
| Speed | 62.1000000 | 62.1000000 | . | 0 | 1 | 0 |
| Height | 131.3000000 | 131.3000000 | . | 0 | 1 | 0 |
| Drop | . | . | . | . | 0 | 1 |
| Length | 3444.90 | 3444.90 | . | 0 | 1 | 0 |
| Inversions | 0 | 0 | . | 0 | 1 | 0 |
| Type | 0 | 0 | . | 0 | 1 | 0 |

### Duration=210

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|---|---|---|---|---|---|---|

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|----------|------|--------|---------|----------------|---|--------|
| Speed | 85.0000000 | 85.0000000 | . | 0 | 1 | 0 |
| Height | 245.0000000 | 245.0000000 | . | 0 | 1 | 0 |
| Drop | 255.0000000 | 255.0000000 | . | 0 | 1 | 0 |
| Length | 5312.00 | 5312.00 | . | 0 | 1 | 0 |
| Inversions | 0 | 0 | . | 0 | 1 | 0 |
| Type | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |

**Duration=213**

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|----------|------|--------|---------|----------------|---|--------|
| Speed | 75.0000000 | 75.0000000 | . | 0 | 1 | 0 |
| Height | 232.0000000 | 232.0000000 | . | 0 | 1 | 0 |
| Drop | 211.0000000 | 211.0000000 | . | 0 | 1 | 0 |
| Length | 5316.00 | 5316.00 | . | 0 | 1 | 0 |
| Inversions | 0 | 0 | . | 0 | 1 | 0 |
| Type | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |

**Duration=216**

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|----------|------|--------|---------|----------------|---|--------|
| Speed | 80.8000000 | 80.8000000 | . | 0 | 1 | 0 |
| Height | 259.2000000 | 259.2000000 | . | 0 | 1 | 0 |
| Drop | 229.7000000 | 229.7000000 | . | 0 | 1 | 0 |
| Length | 6708.67 | 6708.67 | . | 0 | 1 | 0 |
| Inversions | 0 | 0 | . | 0 | 1 | 0 |
| Type | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |

**Duration=219**

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|----------|------|--------|---------|----------------|---|--------|
| Speed | 65.0000000 | 65.0000000 | . | 0 | 1 | 0 |
| Height | 149.0000000 | 149.0000000 | . | 0 | 1 | 0 |
| Drop | 144.0000000 | 144.0000000 | . | 0 | 1 | 0 |
| Length | 4177.00 | 4177.00 | . | 0 | 1 | 0 |
| Inversions | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |
| Type | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |

**Duration=220**

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|----------|------|--------|---------|----------------|---|--------|
| Speed | 64.8000000 | 64.8000000 | . | 0 | 1 | 0 |
| Height | 105.0000000 | 105.0000000 | . | 0 | 1 | 0 |
| Drop | 141.0000000 | 141.0000000 | . | 0 | 1 | 0 |
| Length | 7400.00 | 7400.00 | . | 0 | 1 | 0 |
| Inversions | 0 | 0 | . | 0 | 1 | 0 |
| Type | 0 | 0 | . | 0 | 1 | 0 |

**Duration=240**

| Variable | Mean | Median | Std Dev | Quartile Range | N | N Miss |
|----------|------|--------|---------|----------------|---|--------|
| Speed | 80.0000000 | 80.0000000 | . | 0 | 1 | 0 |
| Height | 230.0000000 | 230.0000000 | . | 0 | 1 | 0 |
| Drop | 215.0000000 | 215.0000000 | . | 0 | 1 | 0 |
| Length | 5394.00 | 5394.00 | . | 0 | 1 | 0 |
| Inversions | 0 | 0 | . | 0 | 1 | 0 |
| Type | 1.0000000 | 1.0000000 | . | 0 | 1 | 0 |
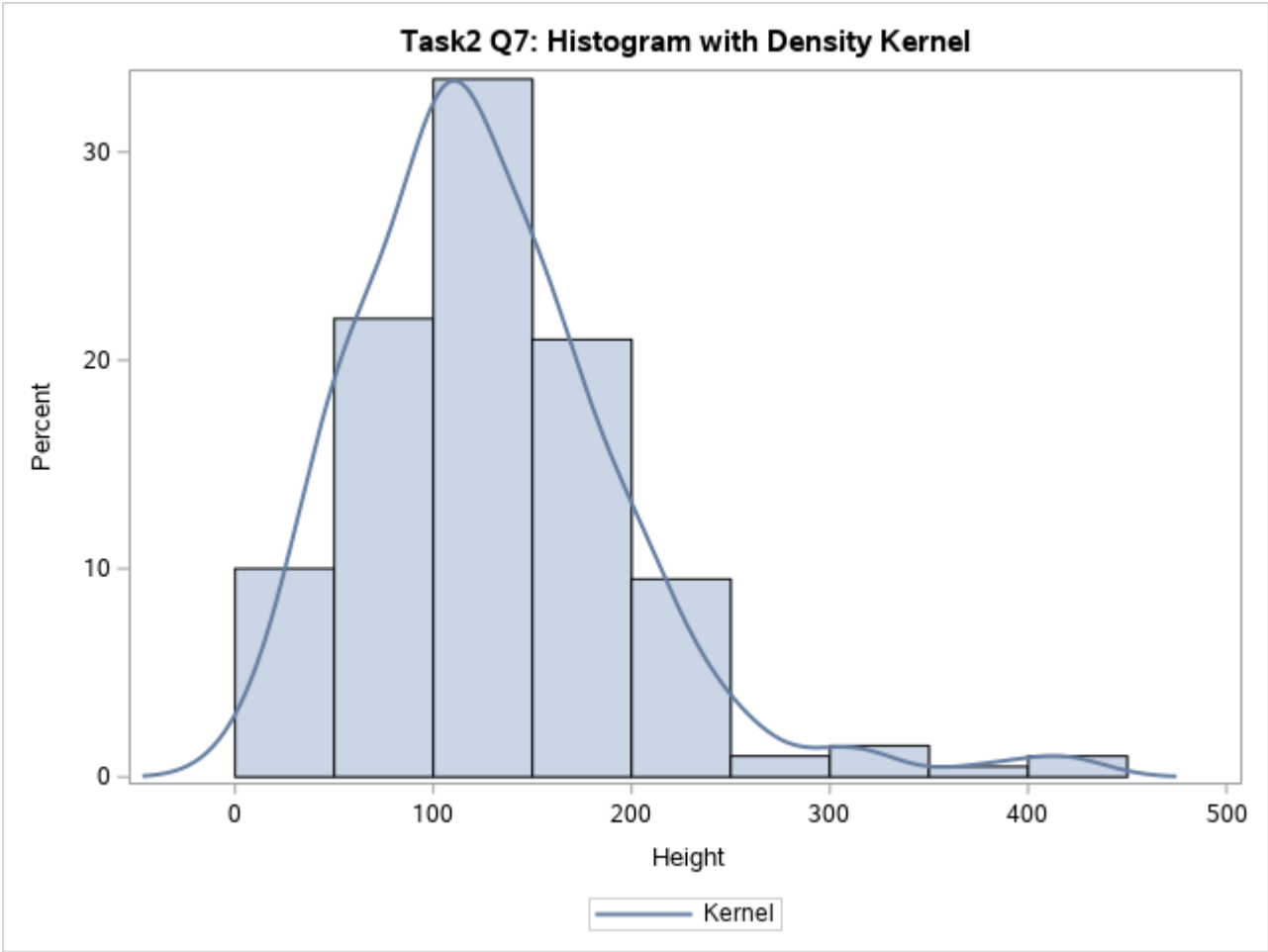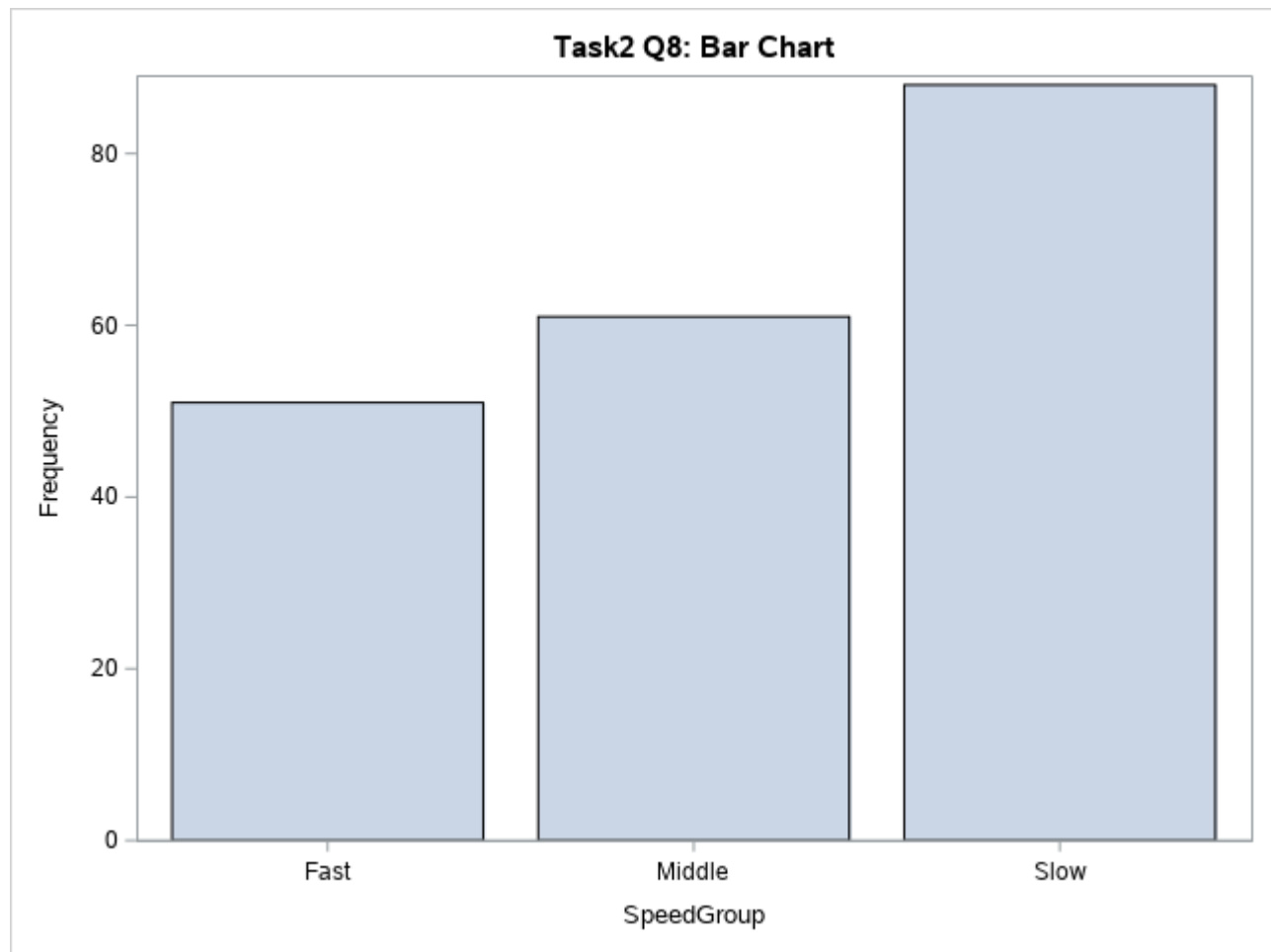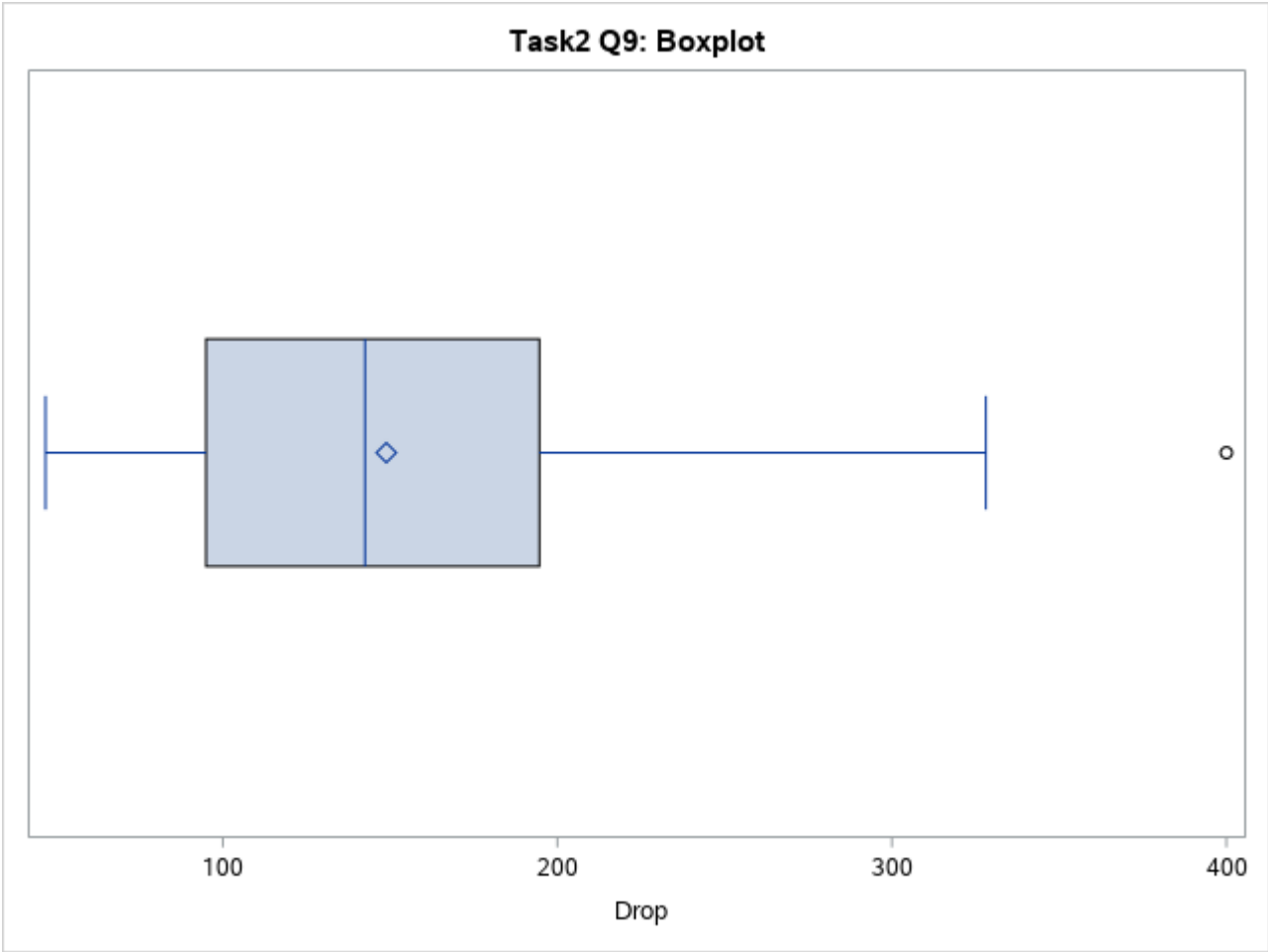
Task2 Q7: Histogram with Density Kernel

Task2 Q8: Bar Chart

## Task2 Q9: Boxplot



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## Task3 Q10, Q11: Inference

### The TTEST Procedure

### Variable: Length

| N | Mean | Std Dev | Std Err | Minimum | Maximum |
|---|------|---------|---------|---------|---------|
| 200 | 2693.8 | 1634.6 | 115.6 | 197.5 | 8133.1 |

| Mean | 98.3% CL Mean | | Std Dev | 98.3% CL Std Dev | |
|------|---------------|---|---------|------------------|---|
| 2693.8 | 2415.6 | 2972.0 | 1634.6 | 1459.2 | 1855.0 |

| DF | t Value | Pr > |t| |
|----|---------|----------|
| 199 | 23.31 | <.0001 |
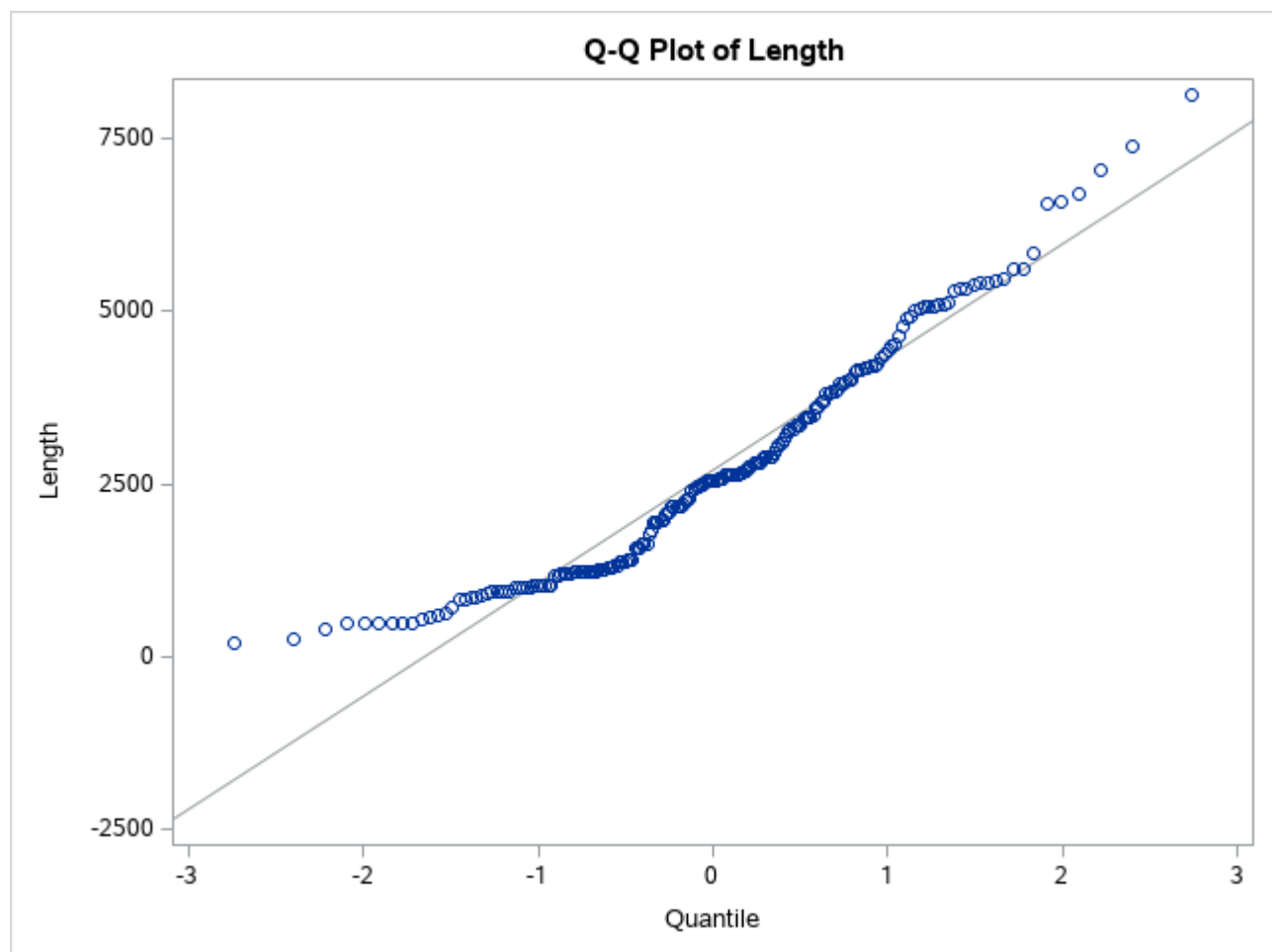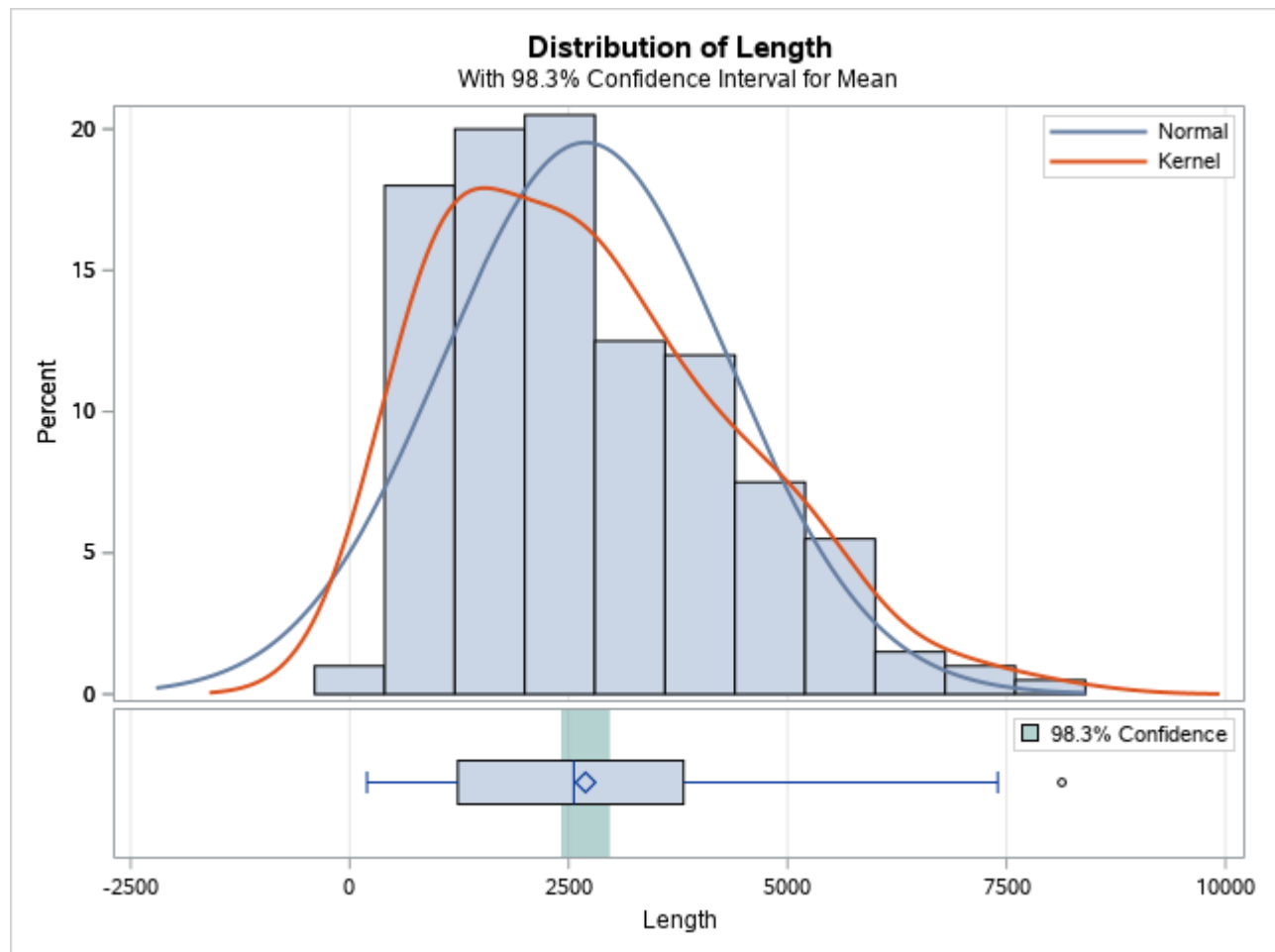
**Distribution of Length**
With 98.3% Confidence Interval for Mean



**Q-Q Plot of Length**

# Task3 Q10, Q11: Inference

## The TTEST Procedure

### Variable: Length

| N | Mean | Std Dev | Std Err | Minimum | Maximum |
|---|------|---------|---------|---------|---------|
| 200 | 2693.8 | 1634.6 | 115.6 | 197.5 | 8133.1 |

| Mean | 98.3% CL Mean | | Std Dev | 98.3% CL Std Dev | |
|------|---------------|---|---------|------------------|---|
| 2693.8 | 2447.0 | Infty | 1634.6 | 1459.2 | 1855.0 |

| DF | t Value | Pr > t |
|----|---------|--------|
| 199 | 30.23 | <.0001 |
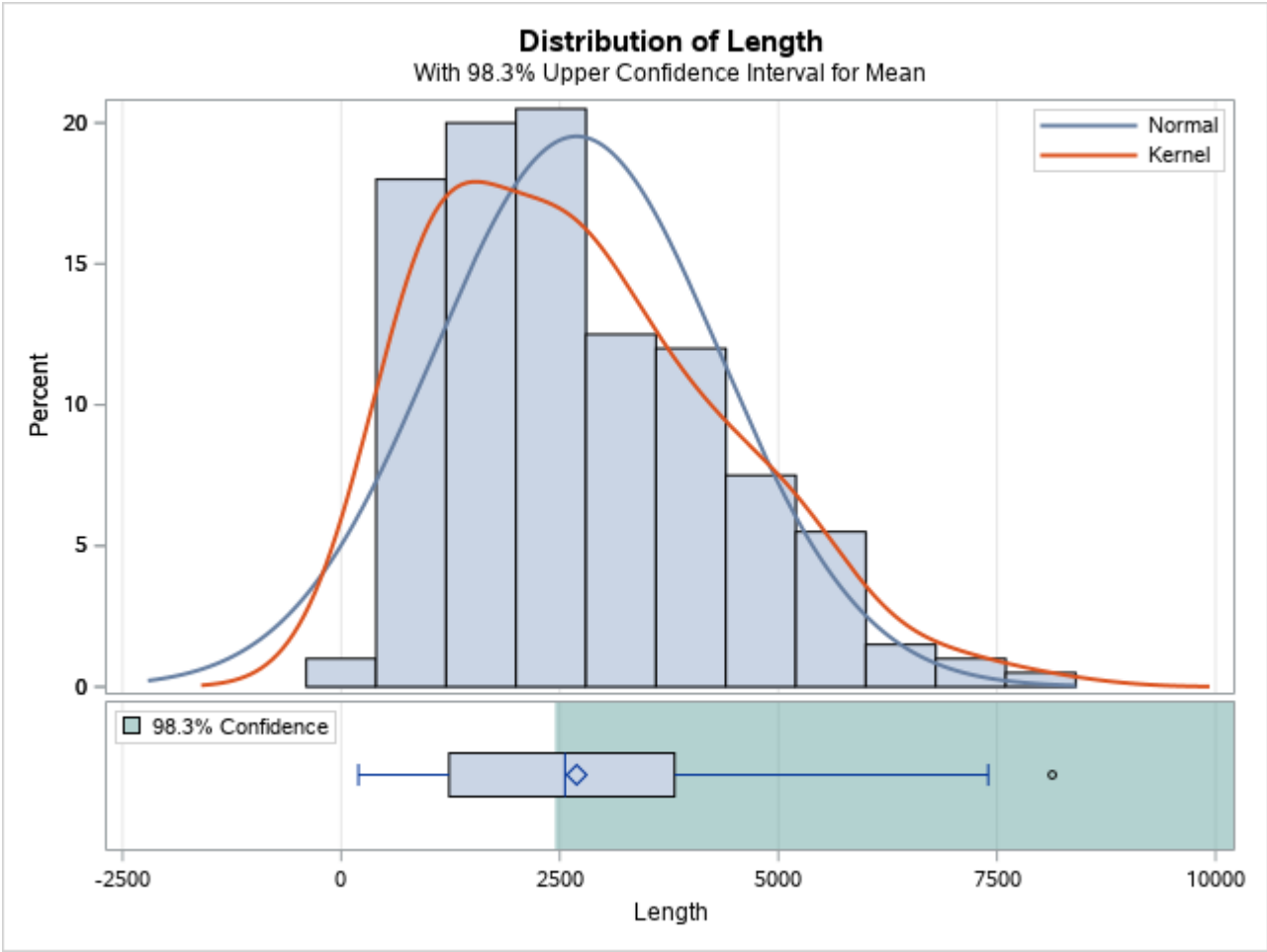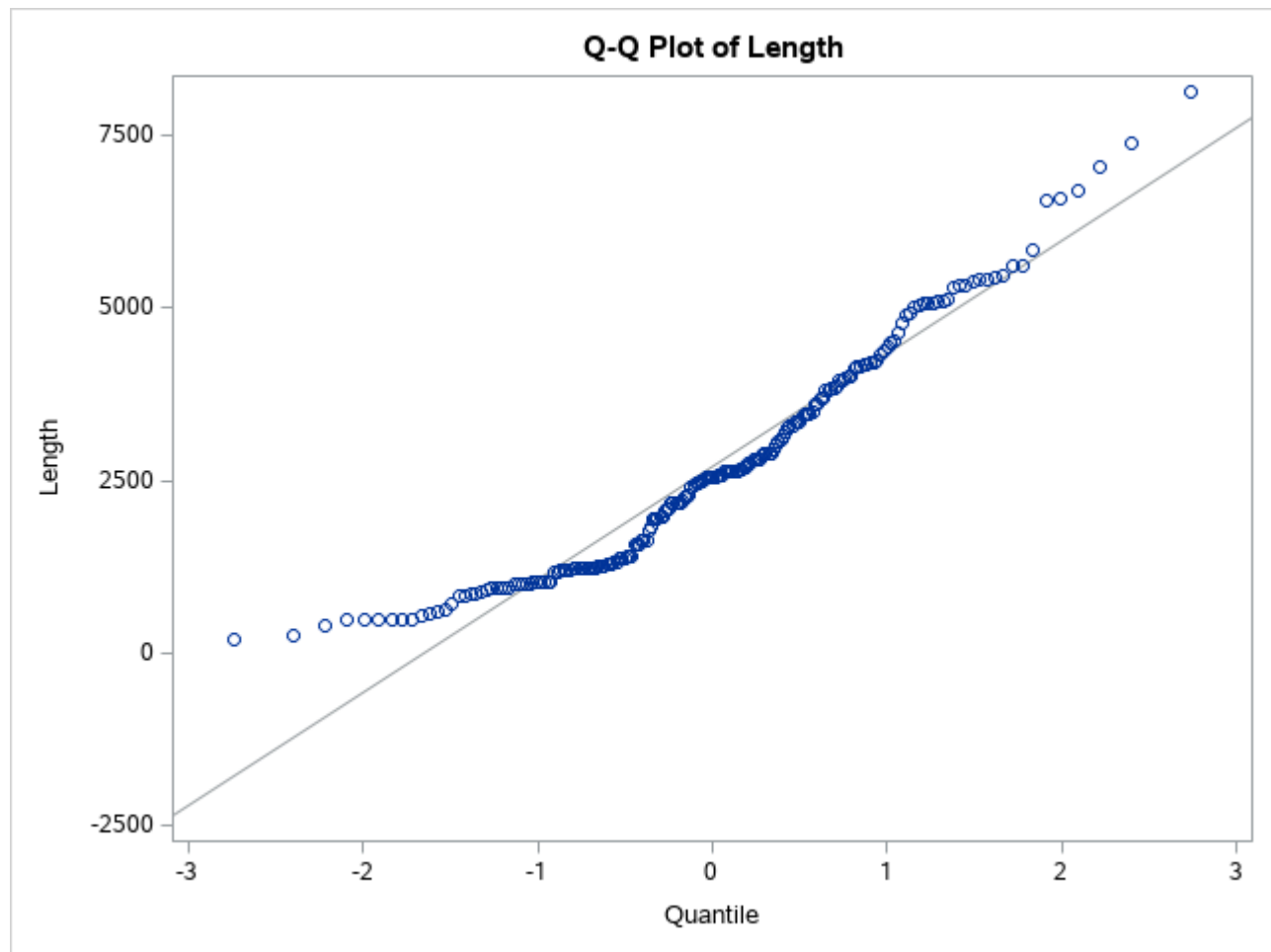


Distribution of Length
With 98.3% Upper Confidence Interval for Mean

## Q-Q Plot of Length



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## Task4 Q12: Multiple Linear Regression

**The REG Procedure**
**Model: MODEL1**
**Dependent Variable: Duration**

| | |
|---|---|
| **Number of Observations Read** | 200 |
| **Number of Observations Used** | 139 |
| **Number of Observations with Missing Values** | 61 |

| Analysis of Variance | | | | | |
|---|---|---|---|---|---|
| **Source** | **DF** | **Sum of Squares** | **Mean Square** | **F Value** | **Pr > F** |
| **Model** | 2 | 191314 | 95657 | 146.85 | <.0001 |
| **Error** | 136 | 88588 | 651.38409 | | |
| **Corrected Total** | 138 | 279902 | | | |

| | | | | |
|---|---|---|---|---|
| **Root MSE** | 25.52223 | **R-Square** | 0.6835 |
| **Dependent Mean** | 124.86331 | **Adj R-Sq** | 0.6788 |
| **Coeff Var** | 20.44013 | | |

| Parameter Estimates | | | | | |
|---|---|---|---|---|---|
| **Variable** | **DF** | **Parameter Estimate** | **Standard Error** | **t Value** | **Pr > |t|** |
| **Intercept** | 1 | 45.15060 | 7.90626 | 5.71 | <.0001 |
| **Length** | 1 | 0.02386 | 0.00141 | 16.89 | <.0001 |

**Parameter Estimates**

| Variable | DF | Parameter Estimate | Standard Error | t Value | Pr > \|t\| |
|---|---|---|---|---|---|
| Type | 1 | 12.28970 | 6.30054 | 1.95 | 0.0532 |

**Correlation of Estimates**

| Variable | Intercept | Length | Type |
|---|---|---|---|
| Intercept | 1.0000 | -0.7098 | -0.8229 |
| Length | -0.7098 | 1.0000 | 0.2821 |
| Type | -0.8229 | 0.2821 | 1.0000 |

### Task4 Q12: Multiple Linear Regression

**The REG Procedure**
**Model: MODEL1**
**Dependent Variable: Duration**



Fit Diagnostics for Duration

| Observations | 139 |
|---|---|
| Parameters | 3 |
| Error DF | 136 |
| MSE | 651.38 |
| R-Square | 0.6835 |
| Adj R-Square | 0.6788 |

**Residual by Regressors for Duration**
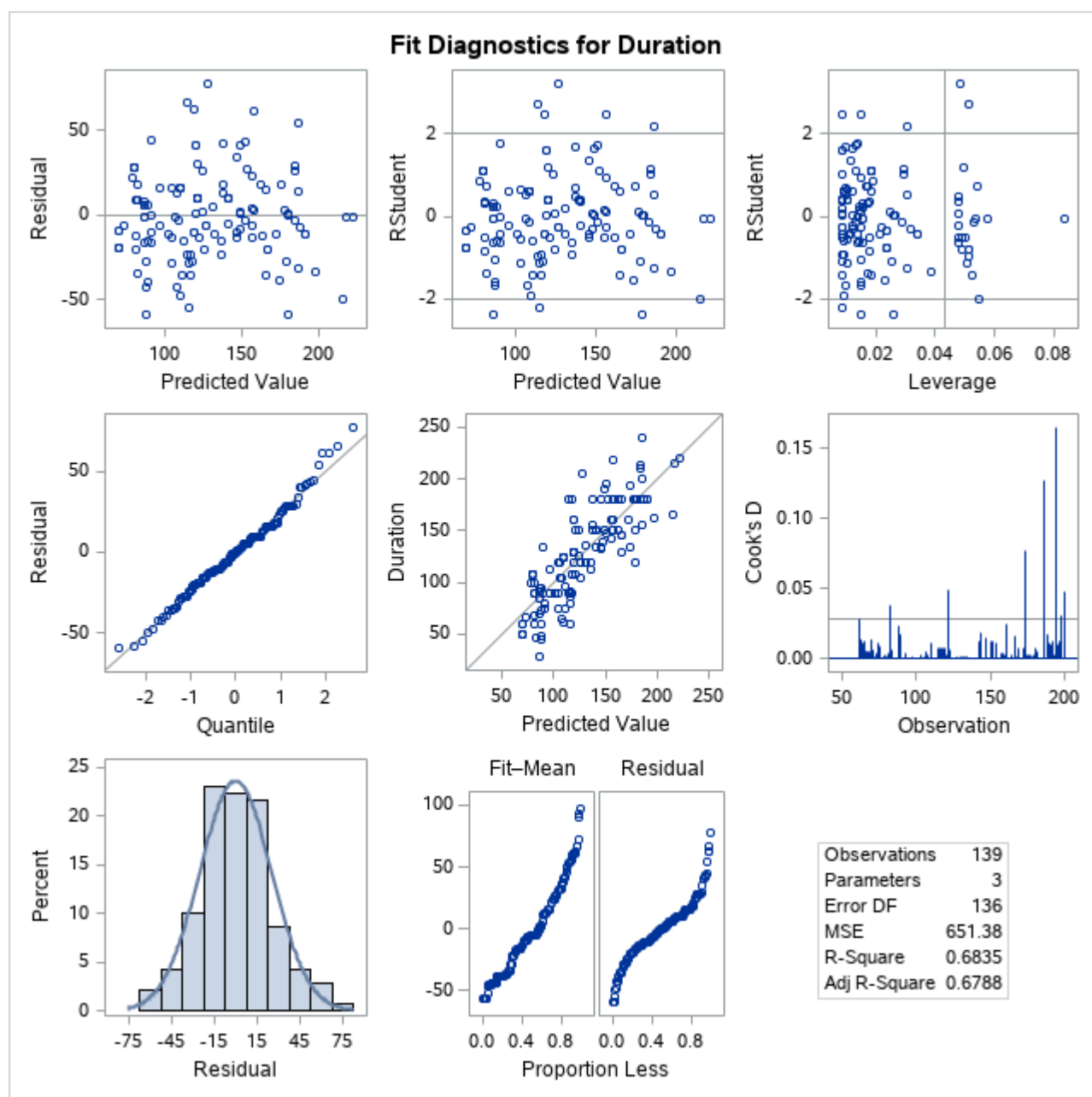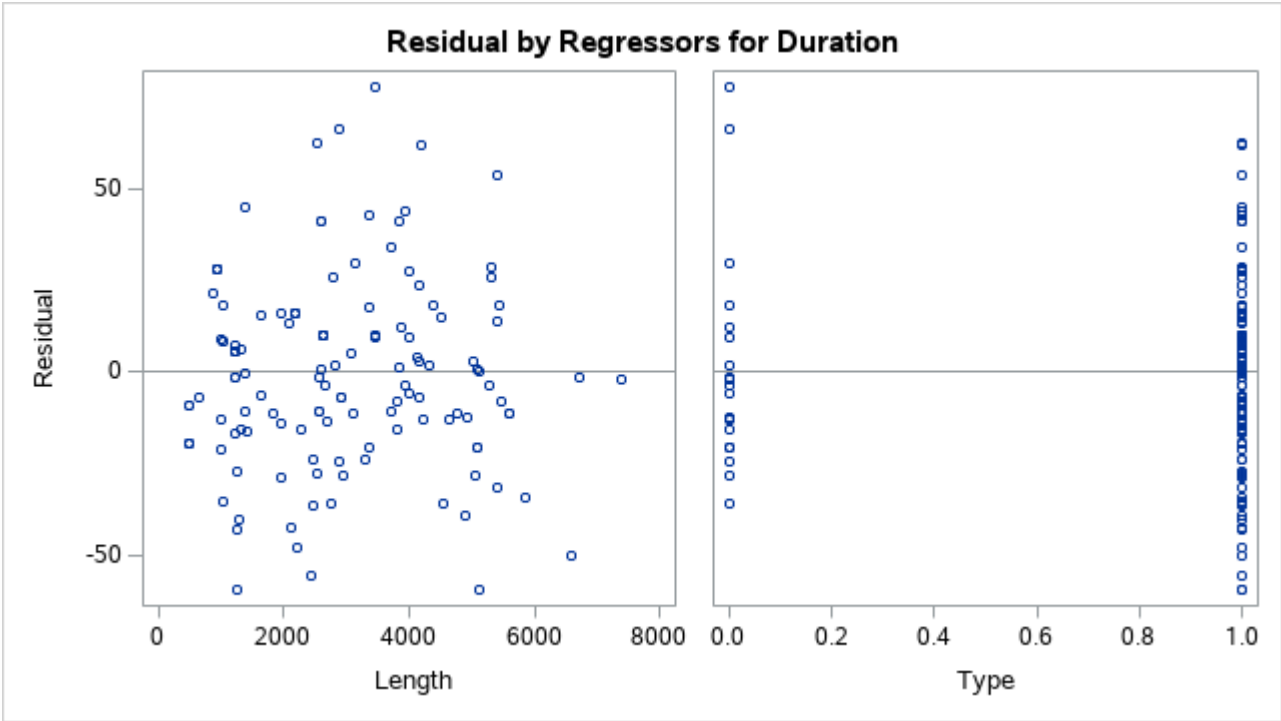
## Task5 Q13: 1-Way ANOVA
## Part a: Mean Duration for each Group

**The MEANS Procedure**

| SpeedGroup | N Obs | Variable | N | Mean | Std Dev | Minimum | Maximum |
|---|---|---|---|---|---|---|---|
| Fast | 51 | Speed | 51 | 78.5686275 | 14.5828460 | 66.0000000 | 149.1000000 |
| | | Height | 51 | 206.0211765 | 70.2950665 | 65.0000000 | 420.0000000 |
| | | Drop | 46 | 206.0336957 | 61.7923566 | 80.0000000 | 400.0000000 |
| | | Length | 51 | 4263.49 | 1608.08 | 541.3000000 | 8133.10 |
| | | Duration | 32 | 159.5000000 | 43.0543542 | 28.0000000 | 240.0000000 |
| | | Inversions | 51 | 0.3137255 | 0.4686233 | 0 | 1.0000000 |
| | | Type | 51 | 0.9019608 | 0.3003266 | 0 | 1.0000000 |
| Middle | 61 | Speed | 61 | 61.1885246 | 4.1123431 | 55.0000000 | 65.6000000 |
| | | Height | 61 | 133.7590164 | 28.9291858 | 70.0000000 | 191.6000000 |
| | | Drop | 38 | 124.7457895 | 30.1772969 | 75.0000000 | 177.0000000 |
| | | Length | 61 | 2784.77 | 1485.36 | 492.2000000 | 7400.00 |
| | | Duration | 52 | 129.0384615 | 45.0106574 | 50.0000000 | 220.0000000 |
| | | Inversions | 61 | 0.7540984 | 0.4341942 | 0 | 1.0000000 |
| | | Type | 61 | 0.8032787 | 0.4008188 | 0 | 1.0000000 |
| Slow | 88 | Speed | 88 | 41.3829545 | 10.8978878 | 4.5000000 | 54.7000000 |
| | | Height | 88 | 78.4897727 | 32.0117078 | 8.0000000 | 147.7000000 |
| | | Drop | 26 | 83.0269231 | 18.7486012 | 47.0000000 | 114.8000000 |
| | | Length | 88 | 1721.04 | 834.6677496 | 197.5000000 | 4230.00 |
| | | Duration | 55 | 100.7636364 | 29.7750602 | 45.0000000 | 180.0000000 |
| | | Inversions | 88 | 0.5681818 | 0.4981680 | 0 | 1.0000000 |
| | | Type | 88 | 0.8977273 | 0.3047431 | 0 | 1.0000000 |

Task5 Q13: 1-Way ANOVA
Part b: Side by Side Boxpots
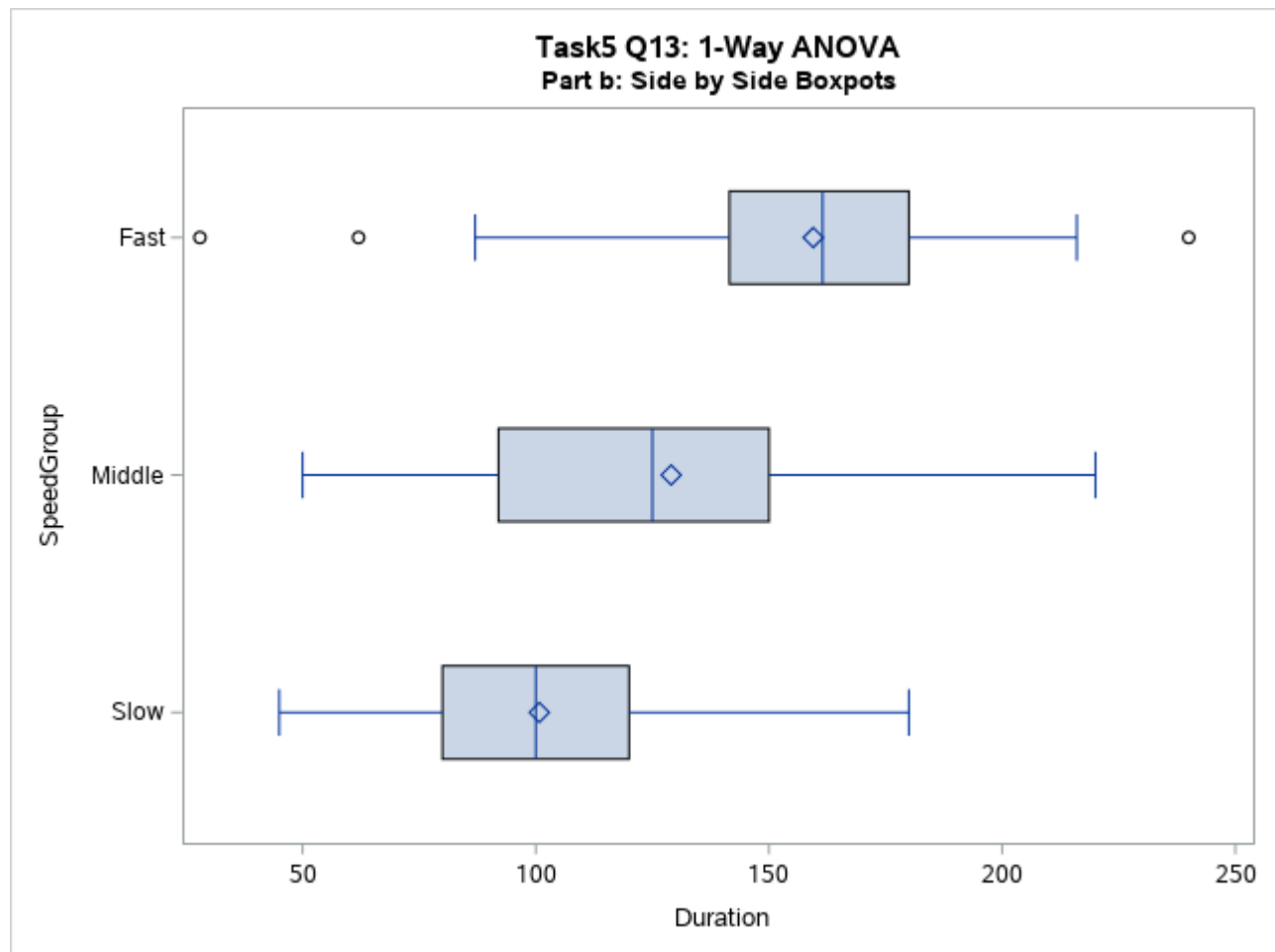
## Task5 Q13: 1-Way ANOVA
## Part c: Run a 1-way ANOVA model

### The GLM Procedure

| Class Level Information | | |
|---|---|---|
| Class | Levels | Values |
| SpeedGroup | 3 | Fast Middle Slow |

| Number of Observations Read | 200 |
|---|---|
| Number of Observations Used | 139 |

## Task5 Q13: 1-Way ANOVA
## Part c: Run a 1-way ANOVA model

### The GLM Procedure

**Dependent Variable: Duration**

| Source | DF | Sum of Squares | Mean Square | F Value | Pr > F |
|---|---|---|---|---|---|
| Model | 2 | 71240.5525 | 35620.2763 | 23.22 | <.0001 |
| Error | 136 | 208661.8503 | 1534.2783 | | |
| Corrected Total | 138 | 279902.4029 | | | |

| R-Square | Coeff Var | Root MSE | Duration Mean |
|---|---|---|---|
| 0.254519 | 31.37020 | 39.16986 | 124.8633 |

| Source | DF | Type I SS | Mean Square | F Value | Pr > F |
|---|---|---|---|---|---|
| SpeedGroup | 2 | 71240.55253 | 35620.27626 | 23.22 | <.0001 |

| Source | DF | Type III SS | Mean Square | F Value | Pr > F |
|---|---|---|---|---|---|
| SpeedGroup | 2 | 71240.55253 | 35620.27626 | 23.22 | <.0001 |



**Distribution of Duration**

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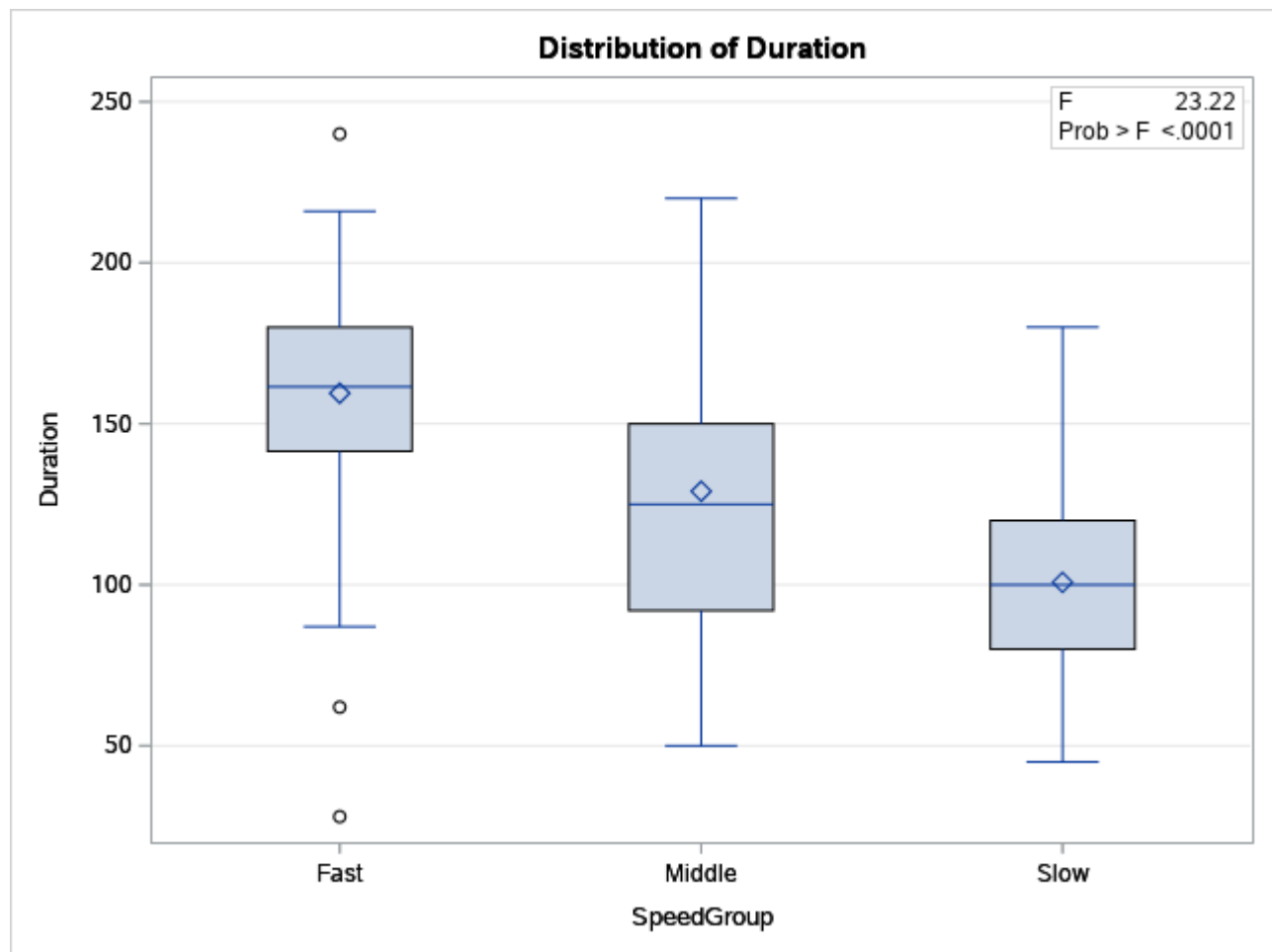
## Task5 Q13: 1-Way ANOVA
## Part c: Run a 1-way ANOVA model

### The GLM Procedure

| Levene's Test for Homogeneity of Duration Variance ANOVA of Squared Deviations from Group Means | | | | | |
|---|---|---|---|---|---|
| Source | DF | Sum of Squares | Mean Square | F Value | Pr > F |
| SpeedGroup | 2 | 36930865 | 18465432 | 3.40 | 0.0362 |
| Error | 136 | 7.3809E8 | 5427123 | | |

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## Task5 Q13: 1-Way ANOVA
## Part c: Run a 1-way ANOVA model

### The GLM Procedure

**Distribution of Duration**



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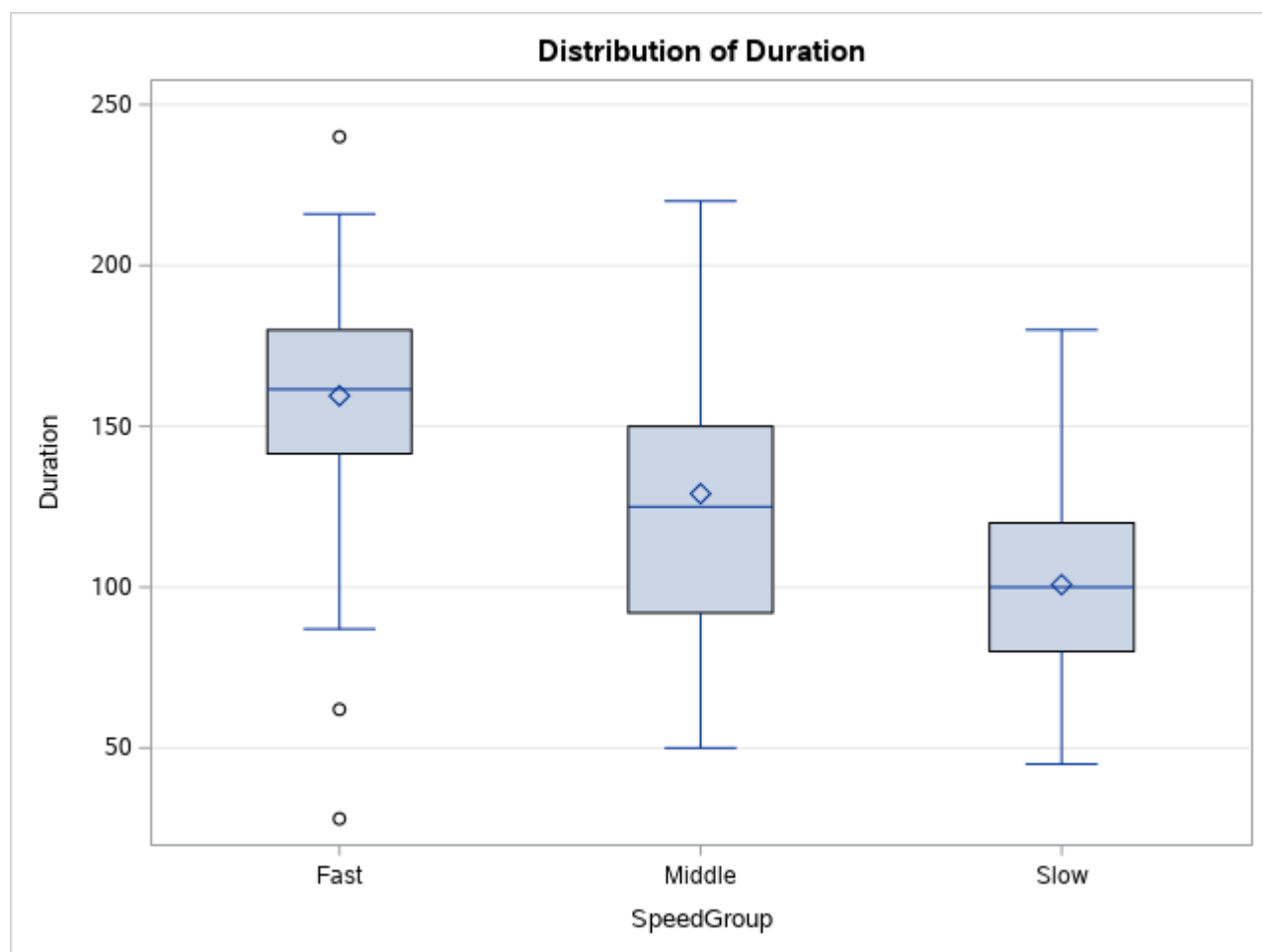
## Task5 Q13: 1-Way ANOVA
## Part c: Run a 1-way ANOVA model

**The GLM Procedure**

**Bonferroni (Dunn) t Tests for Duration**

**Note:** This test controls the Type I experimentwise error rate, but it generally has a higher Type II error rate than Tukey's for all pairwise comparisons.

| | |
|---|---|
| **Alpha** | 0.015 |
| **Error Degrees of Freedom** | 136 |
| **Error Mean Square** | 1534.278 |
| **Critical Value of t** | 2.85355 |

| Comparisons significant at the 0.015 level are indicated by ***. | | | | |
|---|---|---|---|---|
| **SpeedGroup Comparison** | **Difference Between Means** | **Simultaneous 98.5% Confidence Limits** | | |
| **Fast - Middle** | 30.462 | 5.348 | 55.575 | *** |
| **Fast - Slow** | 58.736 | 33.885 | 83.587 | *** |
| **Middle - Fast** | -30.462 | -55.575 | -5.348 | *** |
| **Middle - Slow** | 28.275 | 6.655 | 49.894 | *** |
| **Slow - Fast** | -58.736 | -83.587 | -33.885 | *** |
| **Slow - Middle** | -28.275 | -49.894 | -6.655 | *** |

## Task5 Q13: 1-Way ANOVA
## Part d: Normality Test

**The UNIVARIATE Procedure**
**Variable: Duration**

| Moments | | | |
|---|---|---|---|
| **N** | 139 | **Sum Weights** | 139 |
| **Mean** | 124.863309 | **Sum Observations** | 17356 |
| **Std Deviation** | 45.0364106 | **Variance** | 2028.27828 |
| **Skewness** | 0.18133396 | **Kurtosis** | -0.5765698 |
| **Uncorrected SS** | 2447030 | **Corrected SS** | 279902.403 |
| **Coeff Variation** | 36.0685704 | **Std Error Mean** | 3.81993849 |

| Basic Statistical Measures | | | |
|---|---|---|---|
| **Location** | | **Variability** | |
| **Mean** | 124.8633 | **Std Deviation** | 45.03641 |
| **Median** | 125.0000 | **Variance** | 2028 |
| **Mode** | 180.0000 | **Range** | 212.00000 |
| | | **Interquartile Range** | 65.00000 |

| Tests for Location: Mu0=0 | | | | |
|---|---|---|---|---|
| **Test** | **Statistic** | | **p Value** | |
| **Student's t** | t | 32.68726 | Pr > \|t\| | <.0001 |
| **Sign** | M | 69.5 | Pr >= \|M\| | <.0001 |
| **Signed Rank** | S | 4865 | Pr >= \|S\| | <.0001 |

| Tests for Normality | | | | |
|---|---|---|---|---|
| **Test** | **Statistic** | | **p Value** | |
| **Shapiro-Wilk** | W | 0.983631 | Pr < W | 0.0955 |
| **Kolmogorov-Smirnov** | D | 0.076625 | Pr > D | 0.0445 |
| **Cramer-von Mises** | W-Sq | 0.096136 | Pr > W-Sq | 0.1289 |
| **Anderson-Darling** | A-Sq | 0.655822 | Pr > A-Sq | 0.0882 |

| Quantiles (Definition 5) | |
|---|---|
| **Level** | **Quantile** |
| **100% Max** | 240 |
| **99%** | 220 |
| **95%** | 205 |
| **90%** | 180 |
| **75% Q3** | 155 |
| **50% Median** | 125 |
| **25% Q1** | 90 |
| **10%** | 62 |
| **5%** | 50 |
| **1%** | 45 |
| **0% Min** | 28 |

| Extreme Observations | | | |
|---|---|---|---|
| **Lowest** | | **Highest** | |
| **Value** | **Obs** | **Value** | **Obs** |
| 28 | 62 | 213 | 196 |

| Extreme Observations | | | |
|---|---|---|---|
| **Lowest** | | **Highest** | |
| **Value** | **Obs** | **Value** | **Obs** |
| 45 | 63 | 216 | 197 |
| 47 | 64 | 219 | 198 |
| 48 | 65 | 220 | 199 |
| 50 | 69 | 240 | 200 |

| Missing Values | | | |
|---|---|---|---|
| **Missing Value** | **Count** | **Percent Of** | |
| | | **All Obs** | **Missing Obs** |
| . | 61 | 30.50 | 100.00 |



Distribution and Probability Plot for Duration