***DATA***

There are 3 plants under one tomato cage but the data you see is the average between the three plants and recorded as one plant, so it is made easier for the reader

**Chart 1.1**

Plants under the Red light

|  |  |  |
| --- | --- | --- |
| Day | Avg. height (inches) | Growth since last measurement (inches) |
| 1 | 1.5 | N/A |
| 2 | 1.5 | 0 |
| 3 | 1.7 | 0.2 |
| 4 | 1.8 | 0.1 |
| 5 | 1.8 | 0.1 |
| 6 | 1.9 | 0.1 |
| 7 | 2 | 0.1 |
| 8 | 2.3 | 0.3 |
| 9 | 2.4 | 0.1 |
| 10 | 2.6 | 0.2 |
| 11 | 2.8 | 0.2 |
| 12 | 3.1 | 0.3 |
| 13 | 3.1 | 0 |
| 14 | 3.1 | 0 |
| 15 | 3.2 | 0.1 |
| 16 | 3.3 | 0.1 |
| 17 | 3.4 | 0.1 |
| 18 | 3.6 | 0.2 |
| 19 | 3.8 | 0.2 |
| 20 | 3.8 | 0.2 |
| 21 | 4 | 0.3 |
| 22 | 4 | 0 |
| 23 | 4.5 | 0.5 |
| 24 | 4.7 | 0.2 |
| 25 | 5 | 0.3 |

**Chart 1.2**

Plants under the Green Light

|  |  |  |
| --- | --- | --- |
| Day | Avg. height (in.) | Growth since last measurement (in.) |
| 1 | 0.7 | N/A |
| 2 | 1 | 0.3 |
| 3 | 1.2 | 0.2 |
| 4 | 1.2 | 0 |
| 5 | 1.3 | 0.1 |
| 6 | 1.3 | 0.1 |
| 7 | 1.5 | 0.2 |
| 8 | 1.6 | 0.1 |
| 9 | 1.6 | 0 |
| 10 | 1.8 | 0.2 |
| 11 | 1.8 | 0 |
| 12 | 1.8 | 0 |
| 13 | 2 | 0.2 |
| 14 | 2.3 | 0.3 |
| 15 | 2.5 | 0.2 |
| 16 | 2.6 | 0.1 |
| 17 | 2.7 | 0.1 |
| 18 | 2.7 | 0 |
| 19 | 2.7 | 0 |
| 20 | 2.9 | 0.2 |
| 21 | 3.1 | 0.2 |
| 22 | 3.4 | 0.3 |
| 23 | 3.5 | 0.1 |
| 24 | 3.8 | 0.3 |
| 25 | 4 | 0.2 |

**Chart 1.3**

Plants under the Blue light

|  |  |  |
| --- | --- | --- |
| Day | Avg. Height (in.) | Growth since last measurement (in.) |
| 1 | 1.7 | N/A |
| 2 | 1.9 | 0.2 |
| 3 | 2.2 | 0.3 |
| 4 | 2.2 | 0 |
| 5 | 2.4 | 0.2 |
| 6 | 2.5 | 0.1 |
| 7 | 2.6 | 0.1 |
| 8 | 2.7 | 0.1 |
| 9 | 2.9 | 0.2 |
| 10 | 3.1 | 0.2 |
| 11 | 3.2 | 0.1 |
| 12 | 3.3 | 0.1 |
| 13 | 3.5 | 0.2 |
| 14 | 3.7 | 0.2 |
| 15 | 3.9 | 0.2 |
| 16 | 4.2 | 0.3 |
| 17 | 4.2 | 0 |
| 18 | 4.4 | 0.2 |
| 19 | 4.5 | 0.1 |
| 20 | 4.7 | 0.2 |
| 21 | 5 | 0.3 |
| 22 | 5.1 | 0.1 |
| 23 | 5.2 | 0.1 |
| 24 | 5.4 | 0.2 |
| 25 | 5.4 | 0 |

**Chart 1.4**

Plants not covered at all (Control group)

|  |  |  |
| --- | --- | --- |
| Day | Avg. Height (in.) | Growth since last measurement (in.) |
| 1 | 0.5 | N/A |
| 2 | 0.7 | 0.2 |
| 3 | 0.8 | 0.1 |
| 4 | 0.8 | 0 |
| 5 | 0.9 | 0.1 |
| 6 | 1 | 0.1 |
| 7 | 1 | 0 |
| 8 | 1.2 | 0.2 |
| 9 | 1.2 | 0 |
| 10 | 1.2 | 0 |
| 11 | 1.4 | 0.2 |
| 12 | 1.6 | 0.2 |
| 13 | 1.6 | 0.2 |
| 14 | 1.9 | 0.3 |
| 15 | 2 | 0.1 |
| 16 | 2 | 0 |
| 17 | 2 | 0 |
| 18 | 2.1 | 0.1 |
| 19 | 2.2 | 0.1 |
| 20 | 2.2 | 0 |
| 21 | 2.3 | 0.1 |
| 22 | 2.3 | 0 |
| 23 | 2.4 | 0.1 |
| 24 | 2.5 | 0.1 |
| 25 | 2.5 | 0 |

**Table 1.1**   This chart shows the Avg. Height of the combine 4 groups of plants using cms

**Table 1.2  and Table 1.3** Both the graph below show the same thing, the Growth since the last measurement in a period of 25 days with all 4 groups to compare

**Chart 2.1**

The Surface Area of the plants

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Leaf # | Red | Blue | Green | Control |
| 1 | 59 sq. units | 199 sq.un. | 103 sq. un. | 57 sq. un. |
| 2 | 132 | 94 | 119 | 61 |
| 3 | 137 | 105 | 125 | 77 |
| 4 | 131 | 190 | 186 | 74 |
| 5 | 171 | 123 | 191 | 84 |
| 6 | 146 | 88 | 200 | 86 |
| 7 | 151 | 99 | 186 | 90 |
| 8 | 143 | 69 | 190 | 91 |
| 9 | 132 | 63 | 125 | 86 |
| 10 | 131 | 74 | 135 | 90 |
| Average | 127.4 | 90.5 | 170.1 | 73.9 |

**Table 2.1**   This chart shows the surface area vs. the color of the cellophane

**Chart 3.1**

This shows height statistics showing growth rates and difference in growth

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Color | Red | Green | Blue | Control |
| starting growth | 1.5 inches | 0.7 inches | 1.7 inches | 0.5 inches |
| growth at the end of 25 days | 5 | 4 | 5.4 | 2.5 |
| difference in growth | 3.5 | 3.3 | 3.7 | 2 |
| average growth per day | .14 | .132 | .148 | .06 |