STAT 500 Homework 1

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1. (a)

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| --- | --- | --- |
| Statistic | Type A | Type B |
| Range Sample | 34 | 34 |
| Q1 | 142 | 132 |
| Q3 | 156 | 145 |
| IQR | 14 | 13 |
| Median | 149 | 137 |
| Sample Mean | 149 | 137.78 |
| Std. Dev. | 9.23 | 9.14 |

(b)



(c) The varying ranges of the yield of type A and type B are similar; there is overlapping in the yields of type A and type B; on average, type A tends to have bigger yields than that of type B.

1. (a)

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| --- | --- | --- |
| Statistic | Bacilli Treatment | Control |
| Range Sample | 522 | 717 |
| Q1 | 160 | 134.5 |
| Q3 | 311 | 572.5 |
| IQR | 151 | 438 |
| Median | 214.5 | 316.5 |
| Sample Mean | 242.53 | 345.22 |
| Std. Dev. | 117.93 | 222.21 |

(b)



(c) The range of survival time with Bacilli treatment gets smaller compared to the control group, the survival times are more concentrated; the survival times with treatment tend to be shorter than the control group, and mostly overlap with lower part of the control group.

(d) According to the stem and leaf display, the survival times in the control group are mainly around 100 or 600; With treatment, the survival times are around 100 or 200.