

Honours Multivariate Continuous Assessment 1

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Question 1

Sample Mean Vectors

The mean vector is defined as:

$$\bar{x}_j = \frac{1}{n} \sum_j x_{ij}$$

Therefore the mean vector for each of the 5 time periods are:

Table 1: Sample mean vectors for each of the five time periods

| TimePeriod | MaxBreath | BasHeight | BasLength | NasHeight |
|------------|-----------|-----------|-----------|-----------|
| 1 | 131.367 | 133.600 | 99.167 | 50.533 |
| 2 | 132.367 | 132.700 | 99.067 | 50.233 |
| 3 | 134.467 | 133.800 | 96.033 | 50.567 |
| 4 | 135.500 | 132.300 | 94.533 | 51.967 |
| 5 | 136.167 | 130.333 | 93.500 | 51.367 |