**3A Outliers**

1. The blood glucose level of 30 females is recorded. The results, in mmol/litre, are shown below:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 1.7 | 2.2 | 2.3 | 2.3 | 2.5 | 2.7 |
| 3.1 | 3.2 | 3.6 | 3.7 | 3.7 | 3.7 |
| 3.8 | 3.8 | 3.8 | 3.8 | 3.9 | 3.9 |
| 3.9 | 4.0 | 4.0 | 4.0 | 4.0 | 4.4 |
| 4.5 | 4.6 | 4.7 | 4.8 | 5.0 | 5.1 |

An outlier is an observation that falls either $1.5×IQR$ above $Q\_{3}$, or $1.5×IQR$ below $Q\_{1}$. Find any outliers.

1. The lengths, in cm, of 12 giant African land snails are given below:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 17 | 18 | 18 | 19 | 20 | 20 |
| 20 | 20 | 21 | 23 | 24 | 32 |

1. Calculate the mean and standard deviation, given that $\sum\_{}^{}x=252$ and $\sum\_{}^{}x^{2}=5468$.
2. An outlier is an observation which lies $\pm 2$ standard deviations from the mean. Identify any outliers for this data.