

1. Sara is investigating the variation in daily maximum gust,  $t$  kn, for Camborne in June and July 1987.

She used the large data set to select a sample of size 20 from the June and July data for 1987. Sara selected the first value using a random number from 1 to 4 and then selected every third value after that.

- (a) State the sampling technique Sara used.
- (b) From your knowledge of the large data set explain why this process may not generate a sample of size 20.

The data Sara collected are summarised as follows

$$n = 20 \quad \sum t = 374 \quad \sum t^2 = 7600$$

- (c) Calculate the standard deviation.