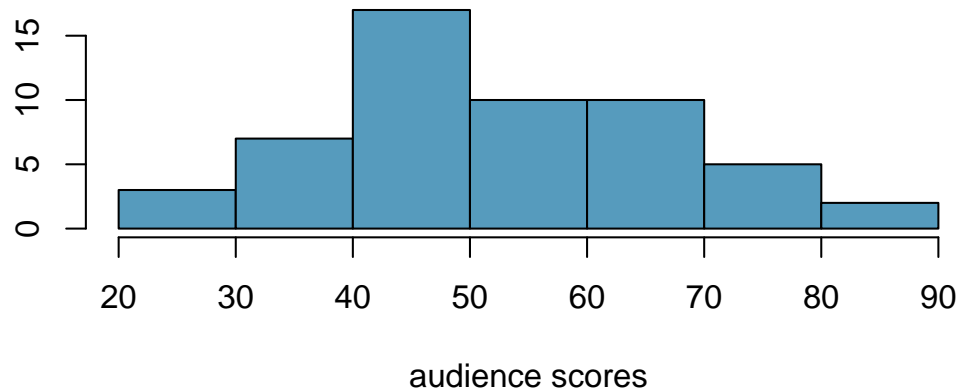


## Application exercise:

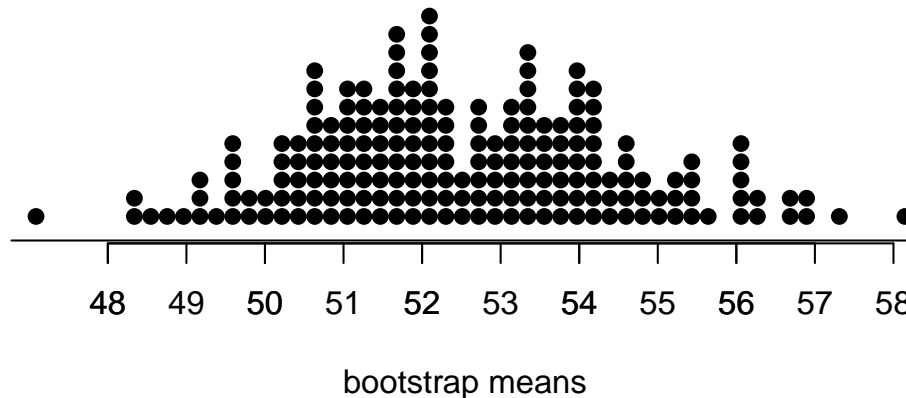
### 4.1 Bootstrap intervals

#### Comedies on RottenTomatoes

The following histogram shows the distribution of RottenTomatoes scores of a random sample of 54 comedies. The average score is 52.52 (out of 100).



The dot plot below shows the distribution of 200 bootstrap means calculated based on this sample.



The mean of the bootstrap distribution is 52.5, and the bootstrap standard error is 1.98.

1. Describe in detail how this bootstrap distribution is constructed, outlining each step.
2. Construct a 95% bootstrap interval for the average RottenTomatoes score of comedies, using both methods.
3. Describe the differences and similarities between bootstrap and sampling distributions.