

# Histogram

## ##Introduction

Histograms are one of the most familiar methods for presenting continuous data. For illustration unpublished data from Cool (1983) will be used. They are the lengths (mm) of 90 copper alloy hairpins from southern Britain, 55 classified as early and 35 as late on archaeological grounds (see Cool, 1990, for a review of the use of such hairpins). The data are given in Table 4.1.

```
#load libraries  
library(ggplot2)
```

```
## Warning: package 'ggplot2' was built under R version 3.5.2
```

## show data table

```
#show data  
pins <- read.csv("data_pins/pins.csv")  
print(pins)
```

```
##      Length Date  
## 1         51 Late  
## 2         52 Late  
## 3         54 Late  
## 4         56 Late  
## 5         57 Late  
## 6         58 Late  
## 7         60 Late  
## 8         60 Late  
## 9         61 Late  
## 10        62 Late  
## 11        62 Late  
## 12        63 Late  
## 13        63 Late  
## 14        63 Late  
## 15        65 Late  
## 16        65 Late  
## 17        66 Late  
## 18        67 Late  
## 19        68 Late  
## 20        68 Late  
## 21        70 Late  
## 22        70 Late  
## 23        70 Late  
## 24        70 Late  
## 25        71 Late  
## 26        74 Late  
## 27        75 Late  
## 28        77 Late  
## 29        78 Late  
## 30        78 Late  
## 31        80 Late  
## 32        80 Late
```

## 33	82	Late
## 34	82	Late
## 35	87	Late
## 36	54	Early
## 37	56	Early
## 38	74	Early
## 39	84	Early
## 40	85	Early
## 41	85	Early
## 42	87	Early
## 43	88	Early
## 44	89	Early
## 45	90	Early
## 46	90	Early
## 47	92	Early
## 48	92	Early
## 49	92	Early
## 50	92	Early
## 51	93	Early
## 52	93	Early
## 53	93	Early
## 54	93	Early
## 55	93	Early
## 56	94	Early
## 57	94	Early
## 58	94	Early
## 59	95	Early
## 60	95	Early
## 61	95	Early
## 62	96	Early
## 63	96	Early
## 64	97	Early
## 65	97	Early
## 66	97	Early
## 67	98	Early
## 68	98	Early
## 69	100	Early
## 70	100	Early
## 71	100	Early
## 72	100	Early
## 73	101	Early
## 74	102	Early
## 75	103	Early
## 76	104	Early
## 77	104	Early
## 78	104	Early
## 79	104	Early
## 80	105	Early
## 81	107	Early
## 82	108	Early
## 83	108	Early
## 84	111	Early
## 85	115	Early
## 86	115	Early

```
## 87    116 Early  
## 88    123 Early  
## 89    128 Early
```

Figure 4.3a – Based on Table 4.2 (pins)

```
Length <- pins$Length  
hist(Length)
```

