

Hw 1 R Code

Deanna Springgay

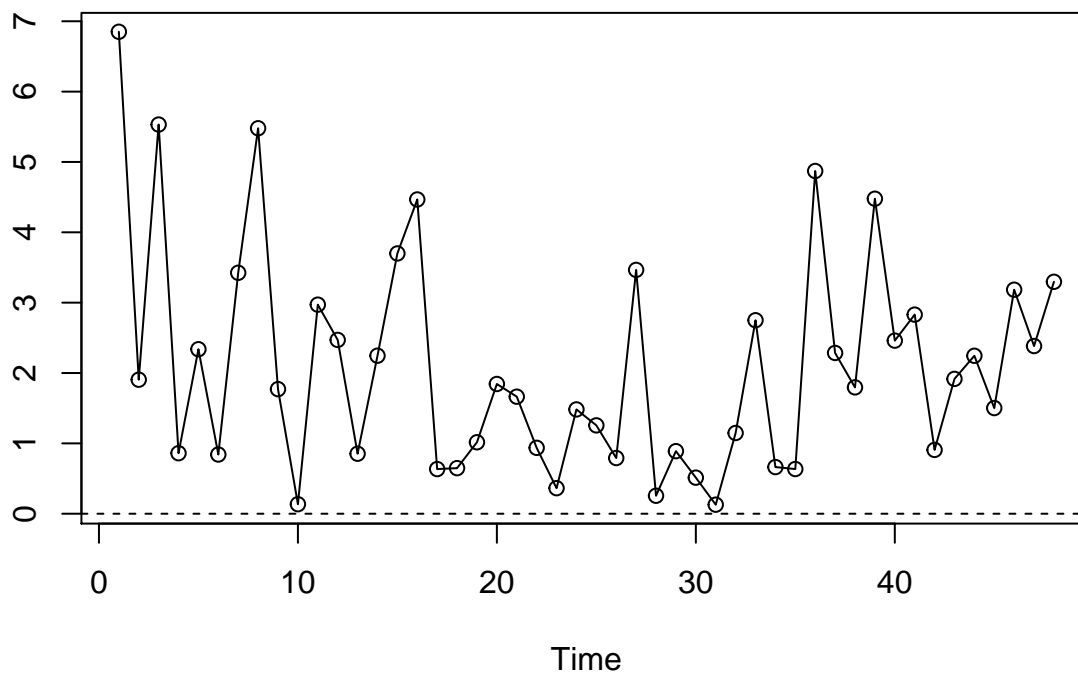
1/31/2021

1.4

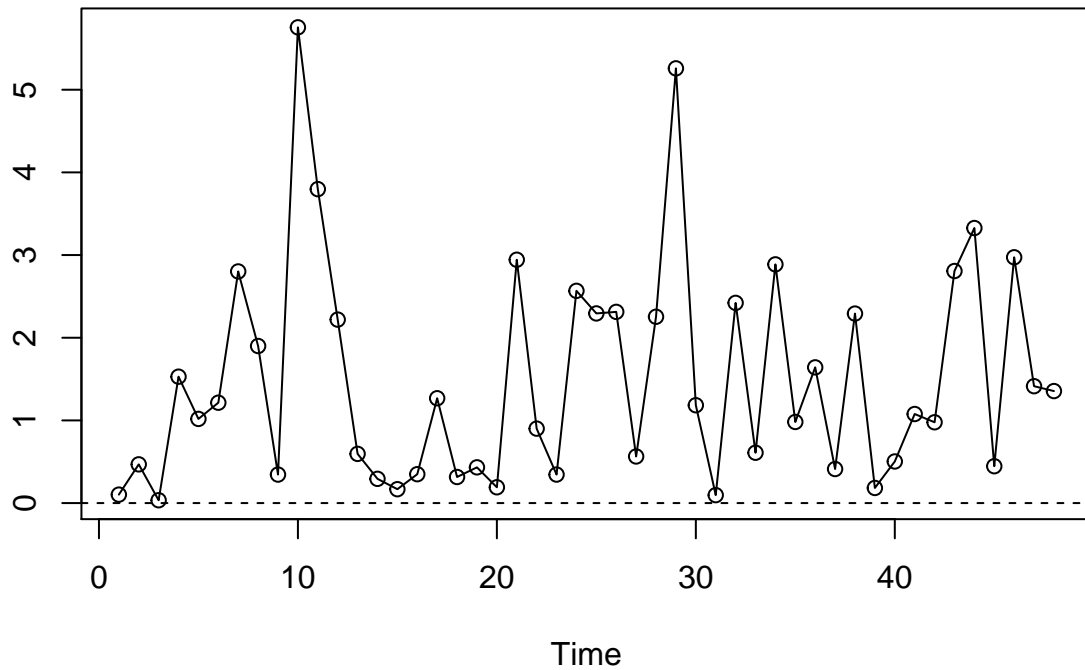
Below are two plots of different simulations of the chi-squared distribution in following code block. Both appear to follow non-normal distributions but they are not random - they follow a chi-squared distribution.

```
set.seed(7)
chiSquare <- ts(rchisq(n = 48, df = 2))
plot(chiSquare, type = "o", ylab = "", main = "Chi-Squared Distribution, n = 48, df = 2")
abline(h = 0, lty = 2)
```

Chi-Squared Distribution, n = 48, df = 2



Chi-Squared Distribution, $n = 48$, $df = 2$

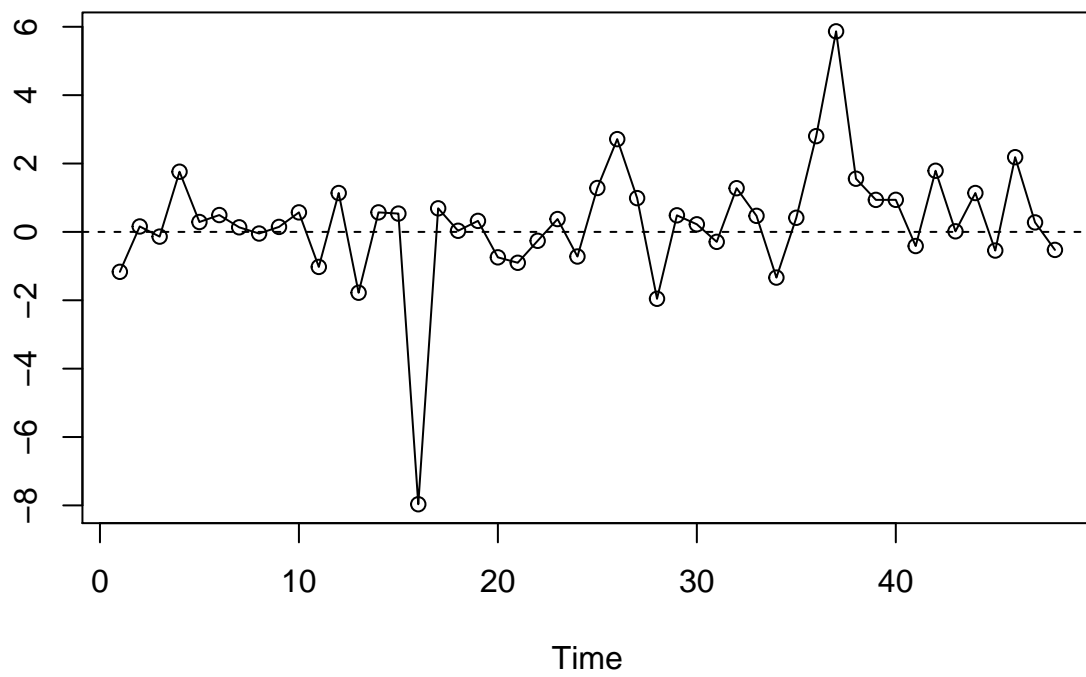


1.5

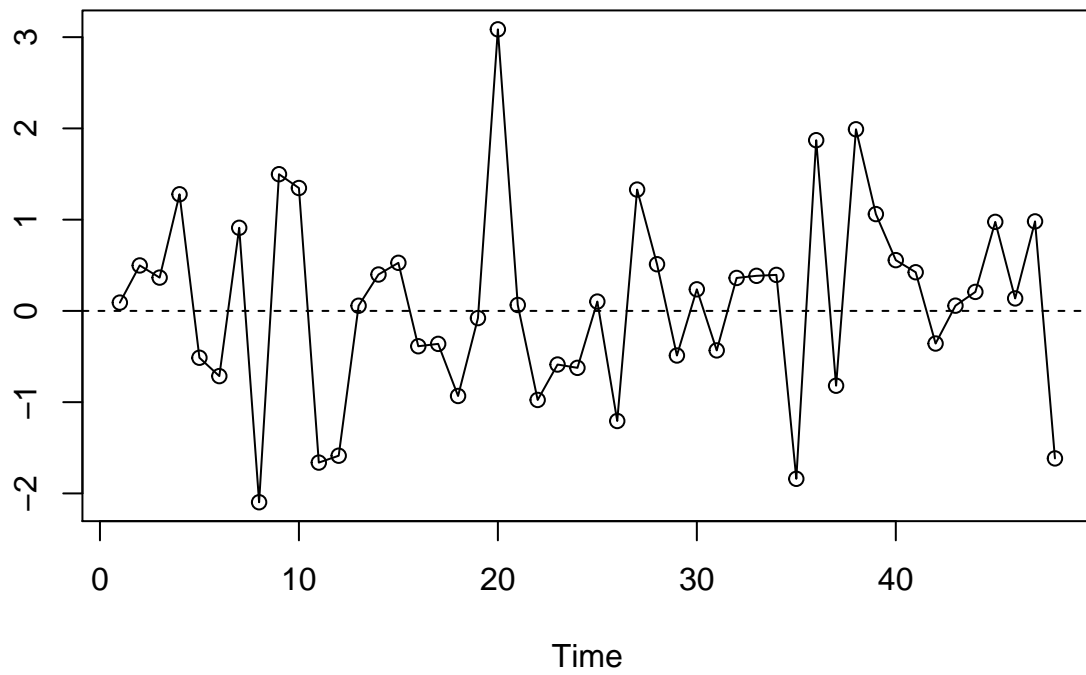
Below are two plots of different simulations of the t distribution in following code block. Both appear to follow normal and do not appear to be random.

```
set.seed(17)
chiSquare <- ts(rt(n = 48, df = 5))
plot(chiSquare, type = "o", ylab = "", main = "t Distribution, n = 48, df = 5")
abline(h = 0, lty = 2)
```

t Distribution, $n = 48$, $df = 5$



t Distribution, n = 48, df = 5



1.6

```
data("tempdub")
plot(tempdub, type = "l", ylab = "Average Temperature")
points(y = tempdub, x = time(tempdub), pch = as.vector(season(tempdub)))
```

