

Homework 6.3

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2024-08-03

Exercise 7.18 (a)

```
n=17
mu=476.4
sigma=1.0
s=.7
t=(n-1)*(s/sigma)^2
t
```

```
## [1] 7.84
```

```
df=n-1
pchisq(t,df=df)
```

```
## [1] 0.04651261
```

Since p value = .05 we reject the null hypothesis so the new machine has a statistically significant less variation than the current machine. // (b)

```
((n-1)*(s)^2)/qchisq(.95,df=df))^(.5)
```

```
## [1] 0.5460235
```