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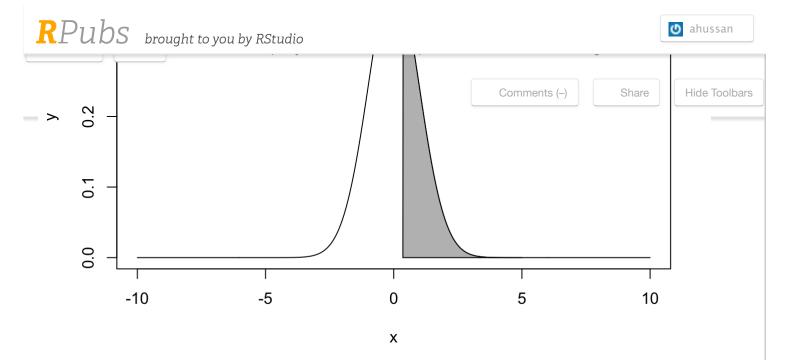

3.18 Heights of female college students.

```
femaleheight <- c(54,55,56,56,57,58,58,59,60,60,60,61,61,62,62,63,63,63,64,65,65,67,67,6
9,73)
femaleheight
```

```
##  [1] 54 55 56 56 57 58 58 59 60 60 60 61 61 62 62 63 63 63 64 65 65 67 67
## [24] 69 73
```

a: The mean height is 61.52 inches with a standard deviation of 4.58 inches. Use this information to determine if the heights approximately follow the 68-95-99.7% Rule.

```
fhMean <- mean(femaleheight)
fhSd <- sd(femaleheight)
```

for 68%:

```
x1 <- fhMean – fhSd
x2 <- fhMean + fhSd
v1 <- pnorm(x2,fhMean,fhSd) – pnorm(x1,fhMean,fhSd)
v1
```

```
## [1] 0.6826895
```

for 95%:

```
x1 <- fhMean – 2*fhSd
x2 <- fhMean + 2*fhSd
```