Section_3.1.R

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```r
#3.1-1 (c)
x = c(9.42,8.69,8.93,8.27,8.82,8.66,8.9,8.31,9.15,9.63,9.41,8.56,
      8.82,8.58,8.43,8.05,8.56,8.55,8.88,8.73,8.29,8.79,8.51,8.85,
      9.34,9.21,8.38,8.51,8.41,8.98,8.58,9.21,8.27,8.76,9.26,8.59,
      8.36,8.71,8.51,8.88,9.20,8.24,8.57,8.85,8.69,8.85,9.08,9.40,9.25,8.79)
mean(x)
```

```
## [1] 8.7734
```

```r
sd(x)
```

```
## [1] 0.3651313
```

```r
#3.1-3 (e)
x = c(382,383,395,380,416,390,420,400,360,340,360,370,374,408,359,419,
      411,423,418,415,432,420,375,432,373,350,410,390,340,380,370,390,
      434,395,379,407,393,385,379,416,420,440,354,405,453,380,380,390,
      390,425,427)
mean(x)
```

```
## [1] 394.8431
```

```r
sd(x)
```

```
## [1] 26.67086
```

```r
#3.1-6
x = c(21.8,21.0,21.6,21.7,21.7,21.6,21.2,21.4,
      20.7,21.7,21.6,21.3,21.4,21.5,21.6,21.8,
      21.4,21.1,21.7,21.6,21.9,20.9,21.5,21.5,
      21.7,21.9,20.8,21.6,21.6,21.9,22.0,
      21.1,21.5,21.7,21.8,20.6,21.3,21.5,21.6,
      21.3,21.3,21.2,21.6,21.7,20.6,21.6,21.4,
      21.0,21.2,21.3,21.5,20.5,21.4,22.0,21.5,
      21.8,20.7,21.0,21.2,21.4,21.8,21.3,22.0,
      21.3,21.7,21.8,21.0,21.0,21.4,21.7,20.9,
      21.7,21.2,21.6,21.7,21.9,20.8,21.3,21.5,21.9,21.6)
quantile(x, c(0.15,0.25,0.50,0.60,0.75))
```

```
##  15%  25%  50%  60%  75%
## 21.0 21.2 21.5 21.6 21.7
```

```r
#3.1-8
x = c(25,9,5,5,5,9,6,5,15,45,55,6,5,6,
      24,21,16,5,8,7,7,5,5,35,13,9,5,
      18,6,10,19,16,21,8,13,5,9,10,10,
      6,23,8,5,10,15,7,5,5,24,9,11,34,
      12,11,17,11,16,5,15,5,12,6,5,5,7,
      6,17,20,7,8,8,6,10,11,6,7,5,12,11,
      18,6,21,6,5,24,7,16,21,23,15,11,
      8,6,8,14,11,6,9,6,10)
```

```r
quantile(x, 0.9)
```

```
##  90%
## 21.2
```