

AP Stats

Chapter 1 1.2 (day 2) HW

Who's Taller?

Who is taller, males or females? A sample of 14-year-olds from the United Kingdom was randomly selected using the CensusAtSchool Web site. Here are the heights of the students (in cm):

Male:	154, 157, 187, 163, 167, 159, 169, 162, 176, 177, 151, 175, 174, 165, 165, 183, 180	17	8.5
Female:	160, 169, 152, 167, 164, 163, 160, 163, 169, 157, 158, 153, 161, 165, 165, 159, 168, 153, 166, 158, 158, 166	22	11

1. Construct a stemplot for male heights.

```

15 | 1479
16 | 235579
17 | 4567
18 | 037
    
```

Key: 15 | 1 represents a male who is 151 cm tall

2. Construct a split stemplot for male heights.

```

15 | 14
15 | 79
16 | 23
16 | 5579
17 | 4
17 | 567
18 | 03
18 | 7
    
```

female

```

15 | 23378889
16 | 00133455667899
    
```

Key: 15 | 2 represents a female who is 152 cm tall

```

15 | 233
15 | 78889
16 | 001334
16 | 55667899
    
```

3. Construct a back to back stemplot comparing male and female heights.

```

      Female
      332
      98887
      433100
      99876655
      163
      + 161
      324 ÷ 2 = 162
      mp = 162

      Female | 15 | 14 Male
              15 | 79
              16 | 23
              16 | 5579
              17 | 4
              17 | 567
              18 | 03
              18 | 7
    
```

Key: 15 | 7 represents a student who is 157 cm tall

mp = 167

C: The overall height of male 14 year old U.K. residents is higher than female 14 year old UK residents. The center (midpoint) for males was greater (@167cm) than females (@162 cm).

U: For both males and females, there does not appear to be any potential outliers.

S: The shape of female distribution^{of heights in cm} is left skewed & unimodal, while the male distribution of heights in cm is roughly symmetric & unimodal.

S: The height in cm of UK males varies more (from 151 cm to 187 cm) than UK females (from 152 cm to 169 cm).