1.3 Homework 45-49 odd, 55, 59, 63, 69, 79

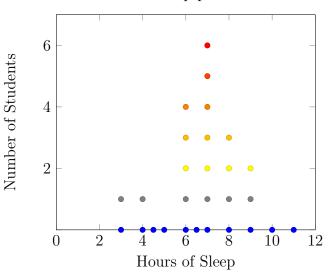
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Instructor: Mr. Thompson

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45. (a) Dotplot:

Hours of Sleep per Student

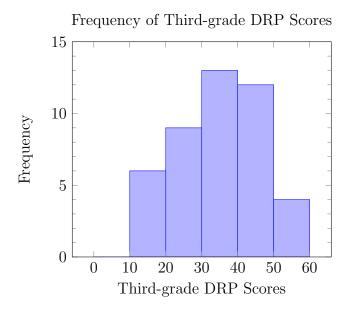


- (b) 5 out of the 28 students
- 47. (a) The dot above 3 signifies one game in which 3 goals were scored by the team
 - (b) The graph shows that the team scored a median of 2 goals and a mean of 3.75. The two outliers, 9 and 10, effect the mean greatly, but the median signifies that 2 goals is the center amount scored. Two goals is quite well, which shows that the team performed well.
- 49. The distribution looks approximately symmetric, as there are no significant tails to the left or right, and no significant outliers.
- 55. The New Jersey family income distribution is much more spread out as compared to the Indiana distribution. Both seem skewed right, as they have tails trailing to the right; however, New Jersey has more outliers.

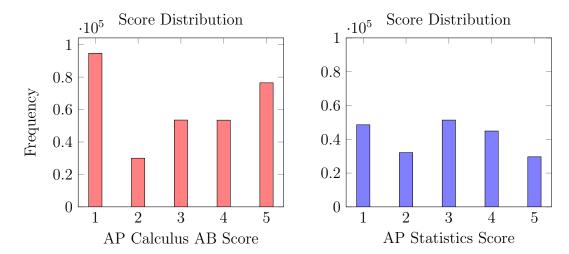
59. (a) Stemplot:

Key:
$$17 \mid 1 = 17.1$$

- (b) There is an outlier at 19.2
- (c) 7 of these bars are less than advertised
- 63. (a) As a general rule of thumb, there should be at least 5 stems. This is done to better spread out and view the data to come to a more plausible conclusion.
 - (b) Key: $13 \mid 1 = 13.1$
 - (c) The distribution is roughly symmetric, as there are no significant tails. There is, however, a significant outlier at 16.0
- 69. This histogram is roughly symmetric. There are no outliers, and the range is 40. The median is between 30-40.



79. (a) Plots:



(b) The variability of the frequency of calculus AB scores is much greater, with the range being roughly 3 times that of the statistics scores. Both, however, appear to be bimodal, with calculus AB having peaks at scores of 1 and 5, and statistics having peaks at scores of 1 and 3. As compared to statistics, calculus AB has a much higher 5 and 1 rate.