Evanston Township High School

Comments on Student Project

**Average Heights of Female Basketball Players
by Erin Boothe and Kelsea Frazier**

by Jiangtao Gou
20 March 2013

Comments

Hello Erin and Kelsea,

You did a very good job of analysing women's height on the Chicago Sky Women's basketball team. You clearly stated your question, provided the information source, listed the data in a clear manner and organized your statistical plan. In your report and presentation, you made a stem-and-leaf plot, computed the mean and tried to compute the standard deviation, got the Z-score. You clearly corrected your way of computing SD during your presentation. In the end, you made your decision based on the statistic which you had got.

Your data (inches): 68, 69, 71, 71, 72, 73, 73, 74, 77, 78, 78.

The data size is 11. The mean is 73.1 (You got it exactly correct), and the SD is 3.3 (You got it correct as well), so the Z-score is

$$Z = \frac{73.1 - 72}{3.3/\sqrt{11}} = +1.11.$$

By using 5% significnat level, we compare 1.11 with 1.645. Note that $1.11 < 1.645$, so we can not reject the null hypothesis, and accept it so the average female basketball player's height could be 6 feet.

Please note: if you only want to consider women's height on the Chicago Sky Women's basketball team, when you got all team member's height, you could have a certain result and do not need any hypothesis. Here we may assume that Chicago Sky Women's basketball team is a good representative of all Women's basketball teams in the United States, so we only get part of data as a sample, and make statistical inference on the whole population.

Thank you for attending *Data Analysis and Statistics*! Wish you the best of luck in your college experience, academics, and future career.

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