Evanston Township High School

Comments on Student Project

Wrestler's Weight by Anthony Derrick

by Jiangtao Gou

19 March 2013

Comments

Hello Anthony,

You did a very good job of analysing wrestler's weight data. You clearly stated your question, and carefully organized your statistical plan. In your report and presentation, you made a stem-and-leaf plot, drew a histgram, computed mean and standard deviation, got the Z-score, and found the p-value. In the end, you made your decision based on the statistic which you had got.

Your data (pound): 125, 133, 133, 141, 141, 141, 149, 149, 157, 157, 165, 165, 174, 174, 184, 184, 184, 197, 285.

Note that there is an extremely large number "285". You could try to explain it.

When you drawing your stemplot, please note that you may not skip the number between 20 and 27 on stem, although no athlete's weight is between 200 and 279. Simply leave their leaves blank.

The data size is 19. The mean is 165.16 (You got it exactly correct), and the SD is 35 (You got a number 22, which is close), so the Z-score is

$$Z = \frac{165.16 - 157}{35/\sqrt{19}} = +1.02.$$

By using 5% significnat level, we compare 1.02 with 1.645. Note that $1.02 < 1.645$, so we can not reject the null hypothesis, and accept it so the weight could be 157.

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

Gou
jgou@u.northwestern.edu