

For each problem, find the equation for the line of best fit and the correlation coefficient:

1)

Years As a Salesman	Annual Salary (in thousands)
6	45
13	75
19	93
17	86
8	58
15	83
3	32

2)

Hours Spent on social media sites per Week	Cumulative Average
9	77
6	88
8	81
14	65
18	71
3	96
4	94
19	59

3)

Hours Spent Exercising per Week	Weight
3	190
9	182
4	194
7	230
6	199
14	170
2	184

4)

Hours Spent Studying per Week	Cumulative Average
7.5	89
10	96
2	70
14	99
18	71
0	68
6	83
11	96

# Making a Box and Whisker Plot

Making a Box and Whisker plot from a set of data is all about medians. You find the median for the entire set of data (which means you need the terms in order from smallest to largest). Then you find the median for the lower half of the data and the median for the upper half of the data.

So we need the data in order from smallest to biggest and find five key points.

- 1) Lowest value
- 2) Highest value
- 3) Median the data.
- 4) Lower Quartile –LQ- (Median of the lower half) (left whisker)
- 5) Upper Quartile –UQ- (Median of the upper half) (right whisker)

- The box marks off the 2<sup>nd</sup> and 3<sup>rd</sup> quartiles.
- A line is drawn in the box where the median is (it DOES NOT have to be in the middle of the box)
- The LQ and UQ make up the whiskers.

Data: scores from a math test:

50, 65, 68, 72, 79, 80, 84, 94, 94, 96, 99, 100

lowest: \_\_\_\_\_

highest: \_\_\_\_\_

Median: \_\_\_\_\_

LQ: \_\_\_\_\_

UQ: \_\_\_\_\_

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40      50      60      70      80      90      100

Data: Points scored by the NY Jets in 16 regular season games:

0, 3, 7, 13, 13, 20, 24, 24, 30, 31, 33, 34, 36, 38, 40, 40

lowest: \_\_\_\_\_

highest: \_\_\_\_\_

Median: \_\_\_\_\_

LQ: \_\_\_\_\_

UQ: \_\_\_\_\_

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0      5      10      15      20      25      30      35      40

Name \_\_\_\_\_

Regressions and Box and Whisker

Make a box and whisker plot for the following data.

Data: Mean temperatures for March 7-22.

31 31 33 34 34 34 35 35 39 39 40 42 44 44 45 47

lowest: \_\_\_\_\_

highest: \_\_\_\_\_

Median: \_\_\_\_\_

LQ: \_\_\_\_\_

UQ: \_\_\_\_\_

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30 32 34 36 38 40 42 44 46 48

4) Make a box and whisker plot for the following set of pizzas ordered each day during the 28 days of February.

10 10 11 13 13 15 16 20 20 20 20 21 23 25 27 28 28 30 31 32 33 37 38 40 49 50 51 55

lowest: \_\_\_\_\_

highest: \_\_\_\_\_

Median: \_\_\_\_\_

LQ: \_\_\_\_\_

UQ: \_\_\_\_\_

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5 10 15 20 25 30 35 40 45 50 55 60