

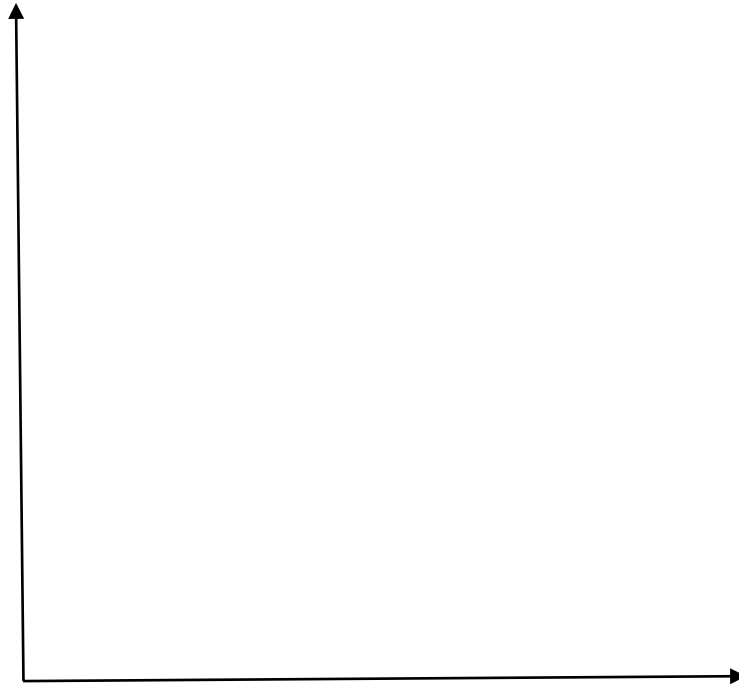
This data reflects the number of hours of exercise gotten by each member of the San Francisco Symphony Orchestra in a given month.

12, 15, 30, 10, 50, 10, 35, 12, 15, 55, 60, 12, 9, 7, 12, 32, 20, 45, 10, 14, 14, 60, 16, 14, 14, 70, 80, 10, 14, 20, 14, 12, 16, 60, 45, 85, 18, 64, 16, 48, 12, 55, 35

1. Create a box plot based on this data (assign this role). First write down the five-number summary.
2. Create a histogram of this data. (assign a second person).
3. Describe the data using sentences about center, spread and shape.
4. A question for your team: Looking at the mean and the median (mean =  $\bar{x}$ ), you notice that they are significantly different. How do you explain that fact?

For the following data, create a scatterplot by hand. Decide as a team which model fits the data best. Then, using a calculator, enter the data and use the chosen model to find the regression equation.

(3, 4) (4, 10) (6, 9) (6, 11) (7, 9) (9, 10) (11, 11) (12, 10) (14, 7) (15, 6) (17, 6) (18, 5)



Chosen model: \_\_\_\_\_

Regression equation: \_\_\_\_\_

Now find the correlation coefficient, the measure of linearity, by using the calculator (not  $R^2$ !!).

$r =$  \_\_\_\_\_

Finally, change the first point of the scatterplot from (3, 4) to (1, 12). Recheck the correlation coefficient.

new  $r =$  \_\_\_\_\_

How has it changed? Why has it changed?