

Lesson # 7 (New)
 week 3 - Box plots and the shape of the distribution.

Find the 5-number summary for the following data (min, Q₁, Q₂, Q₃, MAX)

1 90 51 95
 37 93 74
 47 99 87
 52 21 91
 83 43

Step 1 - Arrange the data (Ascending order)

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15

Step 2 - min = 1
 MAX = 99

MEAN = $\frac{1+2+3+7+\dots+99}{15} \approx 65$

Median = $\frac{50}{100} \times (15+1) = 8$

Q₁ = $\frac{25}{100} \times (15+1) = 4$

Q₃ = $\frac{75}{100} \times (15+1) = 12$

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Step 3 - SUMMARY
 min = 1, Q₁ = 43, Q₂ = 74, Q₃ = 91, MAX = 99

Step 4 - Draw a Box Plot

Are there any outliers? IQR = Q₃ - Q₁ = 48

Left side: Q₁ - 1.5(IQR) = 43 - 1.5(48) = -29

Right side: Q₃ + 1.5(IQR) = 91 + 1.5(48) = 115

NO OUTLIERS

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#4 Points possible: 1. Total attempts: 0

The boxplot below shows salaries for Actuaries and CPAs.

Who makes more money?
 Jason
 Keegan

Jason makes the minimum salary for an Actuary. Keegan makes the third quartile salary for a CPA.

Complete your H.W.

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