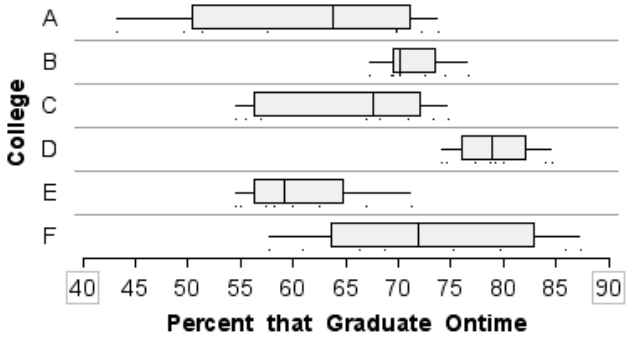
Unit 2 Module 6 Lab Assignment

Name: _____

Learning Goal: Compare distributions from two or more groups.

Specific Learning Objective: Create and interpret boxplots to compare distributions.

1) The data graphed here is 8 years of data from six colleges. The variable is the percent of freshmen that graduate on-time.



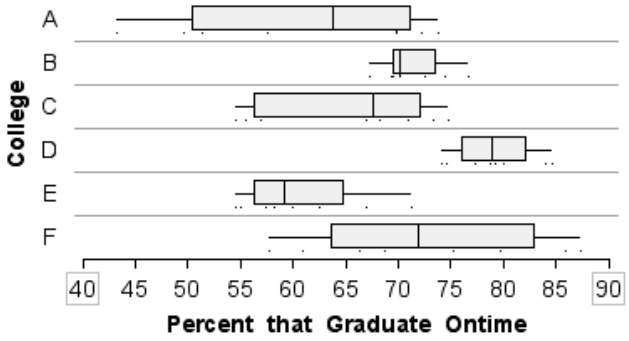
College	n	Min	Q1	Q2	Q3	Max
A	8	43.2	50.5	63.75	71.1	73.8
B	8	67.3	69.5	70.15	73.5	76.7
C	8	54.5	56.25	67.65	72.15	74.8
D	8	74.1	76	79	82.1	84.6
E	8	54.5	56.25	59.15	64.8	71.3
F	8	57.7	63.7	72	82.85	87.4

a) Which college had the highest on-time graduation rate during the years of this study? How do you know?

b) On average, which college had the highest on-time graduation rate? How do you know?

c) Now let's consider the variability in the data. Which college had the most consistent on-time graduation rates overall? Write a sentence precisely describing the variability for this college. (Use the 5-number summaries in the table.)

d) Which college had the smallest amount of variability relative to its median? In other words, which college has the least amount of variability in the middle half of its data? Write a sentence precisely describing the variability for this college. (Use the 5-number summaries in the table.)



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For all of the colleges in this data set there is variability in on-time graduation rates from year to year. When we compare the colleges, there is also a lot of overlap in the distributions. Yet we can still distinguish substantial differences among some of them.

e) Pick two colleges that you think differ substantially in on-time graduation rates. Use the boxplots (and 5-number summaries) to provide at least 3 observations to support your choice.

f) Pick two colleges that you think have a similar distribution of on-time graduation rates. Use the boxplots (and 5-number summaries) to provide at least 3 observations to support your choice.