Table Number:_____   Group Name: _____

Group Members:_____   _____   _____

Distinguishing Distributions

Refer to the dot plots on the document, DOT PLOTS FOR "DISTINGUISHING DISTRIBUTIONS" ACTIVITY on pp.   in your activity book to answer the questions below. Each dot plot depicts the distribution of hypothetical exam scores in various classes.

1. For classes A, B and C, what is the main characteristic that distinguishes these three graphs from each other? What might explain this difference?

2. What is the main characteristic that distinguishes the distributions of exam scores in classes D, E, and F? What might explain these differences?

3. What is the main characteristic that distinguishes the distributions of exam scores in classes G, H, and I? What might be an explanation for the distinguishing feature you find?

4. What strikes you as the most distinctive features of the distribution of exam scores in class J? What might be an explanation for this characteristic?

5. What strikes you as the most distinctive feature of the distribution of exam scores in class K? What might be an explanation for this characteristic?

6. Look again at the graph for class D. If you wanted to tell someone about how the students did on this exam, what would you say?

7. What if we tried to look at the "bulk" of the data? Now, what would you say?

8. What about the graph for class E?

9. What if you were told that most exam scores for a class were between 65 and 85, and that the overall range of scores for that class was between 30 and 100? Can you imagine what that distribution would look like? Sketch it below.

Reference

Rossman, A., & Chance, B. (2002). A data-oriented, active-learning, post-calculus introduction to statistical concepts, applications, and theory. In B. Phillips (Ed.), *Proceedings of the Sixth International Conference on Teaching of Statistics,* Cape Town. Voorburg, The Netherlands: International Statistical Institute. Retrieved September 28, 2007, from http://www.stat.auckland.ac.nz/~iase/publications/1/3i2_ross.pdf