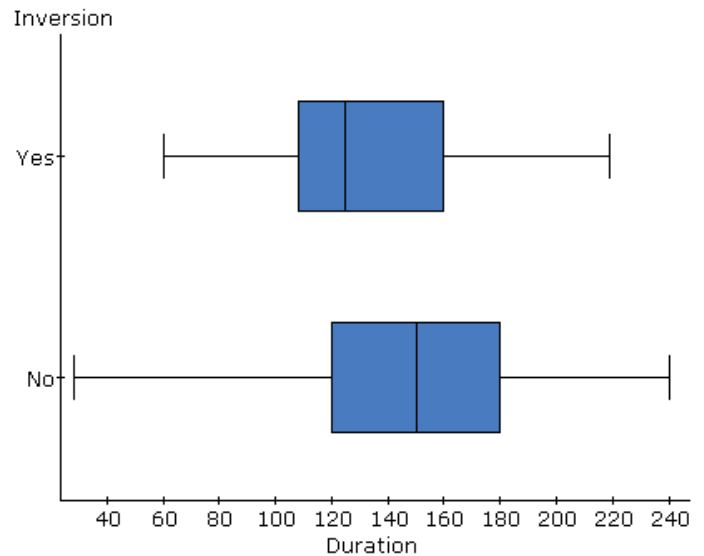


Example: Theme parks are big business. In the US alone, there are nearly 500 theme parks that generate over \$10 billion a year in revenue. Roller coasters are the main attraction at most parks, and engineers and designers compete to make them bigger and faster. For a two-minute ride on the fastest and best roller coasters, fans will wait for hours. Customers not only want the ride to be fast, they also want it to last. It makes sense that the longer the track, the longer the ride will last. But, is the length of the ride influenced by whether riders are turned upside down?

a. In comparing the median duration of the ride, does it seem that roller coasters which have an inversion have a longer or shorter ride?

b. Which type of roller coasters have more variability in their times?



c. What percentage of roller coasters with no inversion last between 120 and 180 seconds?

d. One type of roller coaster likely has a symmetric distribution and one is likely skewed. Determine which has each shape and explain how your choice.