Percentile

Recap on Percentile

- The pth percentile
  ➢ If $np/100$ is not an integer (where k = largest integer less than $np/100$) : The (k+1)th smallest sample point
  ➢ If $np/100$ is an integer: average of the $(np/100)$th and $(np/100 +1)$th smallest observations

Example: 30 40 45 52 77 77 80 92 93

25th percentile:

n=9 and p=25

np/100 = 2.25 , is not integer

k=2 --> (k+1)=2+1=3rd smallest sample point = 45

Recap on Percentile

- The pth percentile
  ➢ If np/100 is not an integer (where k = largest integer less than np/100) : The (k+1)th smallest sample point
  ➢ If np/100 is an integer: average of the (np/100)th and (np/100 +1)th smallest observations

Example: 30 40 45 52 77 77 80 92 93 95

60th percentile:

n=10 and p=60

np/100 = 6 , is an integer

Average of 6th and 7th largest observations

=(77+80)/2=157/2=78.5