Data representation example

Raw data of 20 test scores:

82, 74, 88, 66, 58, 74, 78, 84, 96, 76, 62, 68, 71, 92, 86, 76, 52, 76, 82, 78

Create a Stem-and-Leaf graph.

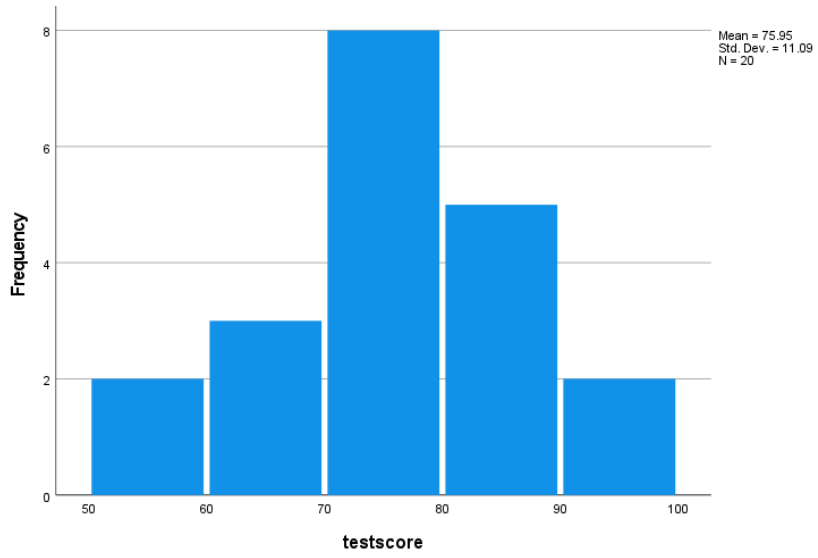
Stems	Leaves
5	28
6	268
7	14466688
8	22468
9	26

Key: 5 | 2 = 52

Create a frequency distribution and a relative frequency distribution. The first category is set up for you.

Interval	Frequency	Relative Frequency
50-59	2	.1
60-69	3	.15
70-79	8	.4
80-89	5	.25
90-99	2	.1
Total	20	1

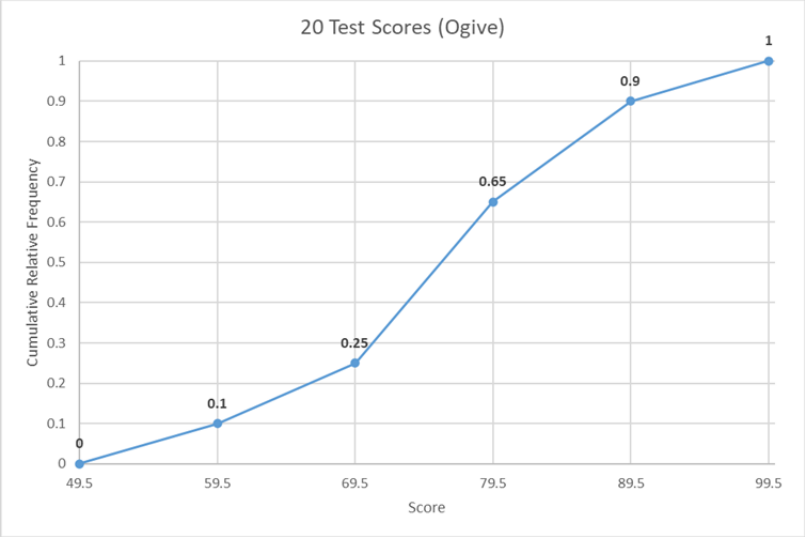
Create a histogram for the data.



Find the real limits for each class, and then find the cumulative relative frequency.

Real Limits	Cumulative Rel. Freq.
49.5 – 59.5	.1
59.5 – 69.5	.25
69.5 – 79.5	.65
79.5 – 89.5	.9
89.5 – 99.5	1

Create an Ogive (polygon of the cumulative relative frequency distribution).



From your Ogive, estimate the 25th percentile, the 50th percentile (median), and the 75th percentile. Then draw a simple box plot.

Q1 (25th percentile): About 69
Median (50th percentile): About 76
Q3 (75th percentile): About 84