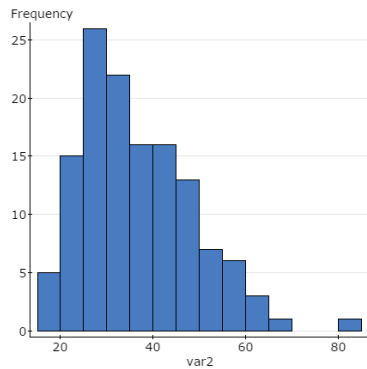


You are welcome to use your calculator or a table for any or all of the following problems. You do not need to show any work.

1. For  $N(0,1)$ , what is the z-value at the 23rd percentile? \_\_\_\_\_
2. For  $N(0,1)$ , what percent of the distribution is at or above the z value of 0.8? \_\_\_\_\_

age	freq
18	5
24	15
28	26
32	22
37	16
43	16
46	13
51	7
56	6
62	3
67	1
71	0
78	0
81	1

3. Consider the data summaries below about ages (var2 in both graphics) of social media users. Mrs. Frazier has grouped some data (in the raw data table) to make it easier for you to analyze.



- a. The box and whisker plot for this data has (circle TWO)
  - An outlier      Only one fence      No outliers
  - More than one outlier      Two fences      No fences
- b. Relative to the graph's mode, the distribution shows (circle one)
  - Skew left      Skew right      Symmetry      Uniformity
- c. The Normal model (even if it didn't fit) would be written as:  $N( \text{_____,} \text{_____)}$
- d. **Assume the distribution is Nearly Normal.** The Normal Probability Plot (circle as many as apply)
  - Is a diagonal line      Compares frequency with the var2      Shows outliers if they exist
  - Compares z with var2      Compares frequency with z      Is a histogram
  - Is a curve      Is a horizontal line      Is used to estimate area under the curve

Column	n	Mean	Variance	Std. dev.	Std. err.	Median	Range	Min	Max	Q1	Q3
var2	131	36.099237	143.32085	11.971668	1.0459695	34	65	17	82	26	44

- e. Measures of center could be used to determine if the distribution is nearly normal. This is because (circle all that apply)
  - If the mean is greater than the median, the graph will show skew to the lower values
  - If the mean, median, and mode are approximately equal, skew is uniform
  - If the mean is zero, then the graph must be normal
  - All measures of center will occur at the same region if the graph is symmetric and unimodal
- f. The percentage of the distribution between Q1 and Q3 is (circle one) 2      18      25      50      68  
75
- g. The percentage of the distribution within 1 standard deviation of the mean is about (circle one)  
1      19      24      45      48      68      71
- h) Sketch the Normal Distribution upon your histogram (even if the histogram is not Nearly Normal).