

The dataset below is per capita annual income for the US by state in 1997.

Alabama	18493.00
Alaska	22453.00
Arizona	19844.00
Arkansas	17378.00
California	23576.00
Colorado	24003.00
Connecticut	32117.00
Delaware	25752.00
D. C.	31812.00
Florida	22409.00
Georgia	21350.00
Hawaii	23100.00
Idaho	18170.00
Illinois	25024.00
Indiana	20944.00
Iowa	20499.00
Kansas	21632.00
Kentucky	19329.00
Louisiana	18350.00
Maine	19590.00
Maryland	25705.00
Massachusetts	27972.00
Michigan	22680.00
Minnesota	23777.00
Mississippi	16213.00
Missouri	21296.00
Montana	17787.00
Nebraska	21121.00
Nevada	23772.00
New Hampshire	24886.00
New Jersey	28974.00
New Mexico	17380.00
New York	27287.00
North Carolina	20714.00
North Dakota	17987.00
Ohio	21882.00
Oklahoma	18240.00
Oregon	21644.00
Pennsylvania	23122.00
Rhode Island	22857.00
South Carolina	18416.00
South Dakota	19030.00
Tennessee	20424.00

Texas	20990.00
Utah	18130.00
Vermont	20764.00
Virginia	23459.00
Washington	23707.00
West Virginia	16821.00
Wisconsin	21717.00
Wyoming	20096.00

- 1) Calculate the 5 points of data summary and create a boxplot by hand. Calculate Pearson's skewness for the entire dataset.
  
- 2) What can you conclude about the distribution of these data based on Pearson's skewness?
  
- 3) Calculate z-scores for each state in this sample. You will use statistics from your previous homeworks to do this.
  
- 4) What is the probability of encountering a state with annual income greater than or equal to that of Illinois? Use the z-score and normal table to figure this out.
  
- 5) What is the probability of encountering a state with annual income of less than or equal to Maine?
  
- 6) What is the probability of a state with annual income between that of Maine and Illinois?