

Data Analysis, Statistics and Probability

Sample Question 1

City	High Temperature
<i>A</i>	$t^{\circ}\text{F}$
<i>B</i>	87°F
<i>C</i>	81°F
<i>D</i>	62°F
<i>E</i>	93°F

The table above shows the high temperature last Thursday for five cities, *A* through *E*. If the median of the Thursday high temperatures for these cities was 81°F , which of the following could NOT have been the high temperature last Thursday for City *A* ?

- A. 85°F**
- B. 75°F
- C. 65°F
- D. 55°F

Explanation:

Choice (A) is correct. If the median of the Thursday high temperatures for the five cities was 81°F , then when the five high temperatures are listed in order from greatest to least (or least to greatest), 81°F must be the third temperature in the list. Since the three greatest known high temperatures are 93°F , 87°F and 81°F , the unknown high temperature for City *A* must be less than or equal to 81°F . Of the given choices, only 85°F is NOT less than or equal to 81°F , and therefore only 85°F could NOT have been the high temperature last Thursday for City *A*.