

Answer on Question #49218 – Math – Statistics and Probability

The acreage (in thousands of acres) of the 39 U.S. National Parks is shown here. Construct a frequency distribution for the data using eight classes.

41 66 233 775 169

36 338 233 236 64

183 61 13 308 77

520 77 27 217 5

650 462 106 52 52

505 94 75 265 402

196 70 132 28 220

760 143 46 539

Solution

The acreage list above had a minimum value of 5 and a maximum value of 775, so the range is

$$775 - 5 = 770.$$

We use eight classes, so class width is

$$\frac{770}{8} = 96.25.$$

Rounded up, 96.25 becomes $w = 97$.

The lower class limits are 5; $5 + 97 = 102$; $102 + 97 = 199$; $199 + 97 = 296$; $296 + 97 = 393$; $393 + 97 = 490$;

$490 + 97 = 587$; $587 + 97 = 684$.

The lower class limits are

101; 198; 295; 392; 489; 586; 683; 775.

Our frequency distribution table is

Class	Frequency
5-101	17
102-198	6
199-295	6
296-392	2
393-489	2
490-586	3
587-683	1
684-775	2