

# Statistics - math problem example



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## Statistics

Because there are 50 numbers, we can divide these numbers into groups of 10 (5 groups). Next we subtract the lowest number from the highest number ( $76 - 16 = 60$ ). After this, we will divide the difference by the number of groups that we came up with ( $60 / 5 = 12$ ). Once we get the class width (12), we add it to the lowest number in order to get the lowest class limit ( $16 + 12 = 28$ ). If we keep on repeating this step, we can determine all the appropriate class limits ( $28 + 12 = 40$ ,  $40 + 12 = 52$ ,  $52 + 12 = 64$ , and  $64 + 12 = 76$ ). Because these are the maximum limits, we have to subtract 1 from each class limit ( $16 + 12 - 1 = 27$ ,  $28 + 12 - 1 = 39$ ,  $40 + 12 - 1 = 51$ ,  $52 + 12 - 1 = 63$ ). Now that we have worked this out, we can create the frequency distribution table:

Age	Frequency
16-27	26
28-39	9
40-51	5
52-63	1
64-76	9

From this frequency table, we can see that the data are skewed to the right. If we were to graph this table, we would understand that the mass of distribution is concentrated more on the left-hand side. This is because there are relatively few high values, thus skewing the graph to the right. Because this graph would not contain a normal curve, we could predict a high number of people between the ages of 16 - 27 (26 out of a total of 50 —  $26/50 = 0.52$  or more than half).