



# **IIT Madras**

## **ONLINE DEGREE**

**Statistics for Data Science-1**  
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**Week - 03**  
**Tutorial - 06**

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6) Rajan just took his first math test in his college analysis class. His professor says he scored in the 80th percentile for the class. Rajan's professor posts a list of grades, without the names, on the blackboard. There are 12 students in the class and 12 grades on the board. The grades are:

36, 85, 68, 93, 81, 70, 38, 66, 78, 75, 55, 60. Then the Rajan's grade is

2 11 6 12 10 7 5 9 8 3 4

$\frac{80}{100} \times 12 = \frac{48}{5} = 9.6$

10<sup>th</sup> → Rajan scored 84

In our sixth question, we have Rajan just took his first math test in his college analysis class. His professor says he scored the eightieth percentile and Rajan's professor posts a list of grades without names. The 12 students, these are the grades, these are the marks actually not grades, but anyway. So, what is Rajan's mark? So, there are 12 students and the eightieth percentile would indicate 80 percent of 12, so if I can sell this with 4 I will get 25 with for 4 I will get 3, 55 and 5 16.

So, I get 48/5, which is equal to 9.6. So, obviously you cannot be the 9.6 person in a class. So, you taken to be the tenth guy, that is in our case we have to order these now. So, in this we will first go look at the smallest value 38 is the smallest followed by 46 which is the second smallest. Then we have a 55 which is the third smallest and then there is 60 the fourth. Sixty sixth the fifth, 68 is the sixth. 70 is the seventh, 75 is the eighth, 78 is the ninth and 84 is the tenth, 85 is eleventh and 93 is of twelfths. So, 84 is our tenth value. So, this implies Rajan scored 84.