

## Statistics - Class XI

### Past Year JEE Questions

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#### Questions

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##### Question: 01

If for some  $x \in \mathbb{R}$ , the frequency distribution of the marks obtained by 20 students in a test is :

<b>Marks</b>	2	3	5	7
<b>Frequency</b>	$(x + 1)^2$	$2x - 5$	$x^2 - 3x$	$x$

then the mean of the marks is

- A. 3.0
- B. 2.8
- C. 2.5
- D. 3.2

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#### Solutions

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##### Solution: 01

##### Explanation

Number of students

$$\Rightarrow (x + 1)^2 + (2x - 5) + (x^2 - 3x) + x = 20$$

$$\Rightarrow 2x^2 + 2x - 4 = 20$$

$$\Rightarrow x^2 + x - 12 = 0$$

$$\Rightarrow (x + 4)(x - 3) = 0$$

$$x = 3$$

<b>Marks</b>	2	3	5	7
<b>No. of students</b>	16	1	0	3

$$\text{Average marks} = \frac{32+3+21}{20} = \frac{56}{20} = 2.8$$