

*Mathemagica*<sup>®</sup>

# TEST – STANDARD – 10<sup>TH</sup> CBSE

Chapters: **Triangles and Statistics**



Total Marks: **50**

Duration of Test: **120 Minutes.**

**Important Points:**

1. Maintain Sequential order while writing the paper.
2. Use pencils wherever necessary.
3. Draw Diagrams wherever necessary.

**A. THEOREMS****[5 mark each]**

- a. Fundamental Theorem of Proportionality
- b. Ratios of Areas of Similar Triangles are proportional to square of their corresponding sides.
- c. Pythagoras theorem
- d. Converse of Pythagoras Theorem.

**B. Solve the following questions:****1. Write down the following formulas and explain them: 5**

- a. Direct Method of finding Mean.
- b. Assumed Mean Method
- c. Step Deviation Method
- d. Formula to find Mode
- e. Formula to find Median

**2. Find Mean, Median and Mode and Compare: 5**

If the median of the distribution given below is 28.5, find the values of x and y.

Class interval	0-10	10-20	20-30	30-40	40-50	50-60	Total
Frequency	5	X	20	15	Y	5	60

**3. Find the median of the following distribution: 4**

Wages (in Rs)	200-300	300-400	400-500	500-600	600-700
No. of Labourers	3	5	20	10	6

**4. The marks in science of 80 students of class X are given below. Find the mode of these marks obtained by the students in science.** **4**

<b>Marks</b>	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
<b>Freq.</b>	3	5	16	12	13	20	5	4	1	1

**5. The following is the distribution of height of students of a certain class in a certain city.** **4**

<b>Height(in cms)</b>	160-162	163-165	166-168	169-171	172-174
<b>No. of students</b>	15	118	142	127	18

**Find the average height of maximum number of students.**

**6. Find Mean using Step Deviation Method:** **4**

<b>Class-interval</b>	0-30	30-60	60-90	90-120	120-150	150-180
<b>Frequency</b>	12	18	22	24	17	7

**7. Find Mean using Step Deviation Method:** **4**

<b>Classes</b>	0-50	50-100	100-150	150-200	200-250	250-300
<b>Frequency</b>	10	15	30	35	25	15