

Maharashtra Board Solutions Class 8-Maths

(Practice Set 11.1): Chapter 11- Statistics



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Maharashtra Board Solutions Class 8-Maths

(Practice Set 11.1): Chapter 11- Statistics

Class 8: Maths Chapter 11 solutions. Complete Class 8 Maths Chapter 11 Notes.

Maharashtra Board Solutions Class 8-Maths (Practice Set 11.1): Chapter 11- Statistics

Maharashtra Board 8th Maths Chapter 11, Class 8 Maths Chapter 11 solutions

Question 1.

The following table shows the number of saplings planted by 30 students. Fill in the boxes and find the average number of saplings planted by each student.

No. of saplings (Scores) x_i	No. of students (frequency) f_i	$f_i \times x_i$
1	4	4
2	6	—
3	12	—
4	8	—
	$N =$ —	$\sum f_i \times x_i =$ —

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$$\begin{aligned}\text{Mean } \bar{x} &= \frac{\boxed{}}{N} \\ &= \frac{\boxed{}}{\boxed{}} \\ &= \boxed{}\end{aligned}$$

∴ The average number of trees planted is

Solution:

No. of saplings (Scores) x_i	No. of students (frequency) f_i	$f_i \times x_i$
1	4	4
2	6	12
3	12	36
4	8	32
	$N = \underline{\hspace{1cm}}$	$\sum f_i \times x_i = 84$

$$\begin{aligned}\text{Mean } \bar{x} &= \frac{\boxed{\sum f_i x_i}}{N} \\ &= \frac{\boxed{84}}{\boxed{30}} = \frac{14 \times 6}{5 \times 6} = \frac{14}{5} \\ &= \boxed{2.8}\end{aligned}$$

∴ The average number of trees planted is

Question 2.

The following table shows the electricity (in units) used by 25 families of Eklara village in a month of May. Complete the table and answer the following questions.

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Electricity used (Units) x_i	No. of families (frequency) f_i	$f_i \times x_i$
30	4	
45	6	
60	12	
75	8	
90	3	
	$N = \underline{\hspace{1cm}}$	$\sum f_i \times x_i =$

- How many families use 45 units electricity?
- State the score, the frequency of which is 5.
- Find N , and $\sum f_i \times x_i$.
- Find the mean of electricity used by each family in the month of May.

Solution:

Electricity used (Units) x_i	No. of families (frequency) f_i	$f_i \times x_i$
30	7	210
45	2	90
60	8	480
75	5	375
90	3	270
	$N = 25$	$\sum f_i \times x_i = 1425$

- 2 families used 45 units of electricity.

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ii. The score for which the frequency is 5 is 75

iii. $N = 25$ and $\sum f_i \times x_i = 1425$

iv.

$$\begin{aligned}\text{Mean } (\bar{x}) &= \frac{\sum f_i x_i}{N} \\ &= \frac{1425}{25}\end{aligned}$$

$$\text{Mean } (\bar{x}) = 57$$

The mean of electricity used by each.

Question 3.

The number of members in the 40 families in Bhilar are as follows:

1, 6, 5, 4, 3, 2, 7, 2, 3, 4, 5, 6, 4, 6, 2, 3, 2, 1, 4, 5, 6, 7, 3, 4, 5, 2, 4, 3, 2, 3, 5, 5, 4, 6, 2, 3, 5, 6, 4, 2. Prepare a frequency table and And the mean of members of 40 families.

Solution:

Number of members (x_i)	Tally marks	No. of families frequency (f_i)	$f_i \times x_i$
1		2	2
2		8	16
3		7	21
4		8	32
5		7	35
6		6	36
7		2	14
		$N = 40$	$\sum f_i x_i = 156$

$$\begin{aligned}\text{Mean } (\bar{x}) &= \frac{\sum f_i x_i}{N} \\ &= \frac{156}{40} = \frac{39 \times 4}{10 \times 4} = \frac{39}{10}\end{aligned}$$

$$\therefore \bar{x} = 3.9$$

$\therefore$ The mean of the members of 40 families is 3.9.

Question 4.

The number of Science and Mathematics projects submitted by Model high school, Nandpur in last 20 years at the state level science exhibition is:

2, 3, 4, 1, 2, 3, 1, 5, 4, 2, 3, 1, 3, 5, 4, 3, 2, 2, 3, 2. Prepare a frequency table and find the mean of the data.

Solution:

Number of projects (x_i)	Tally marks	No. of years frequency (f_i)	$f_i \times x_i$
1		3	3
2		6	12
3		6	18
4		3	12
5		2	10
		N = 20	$\sum f_i x_i = 55$

$$\begin{aligned}\text{Mean } (\bar{x}) &= \frac{\sum f_i x_i}{N} \\ &= \frac{55}{20} = \frac{11 \times 5}{4 \times 5} = \frac{11}{4}\end{aligned}$$

$$\therefore \text{Mean } (\bar{x}) = 2.75$$

$\therefore$ The mean of the given data is 2.75.

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Intext Questions and Activities

Question 1.

The number of pages of a book Ninad read for five consecutive days were 60, 50, 54, 46, 50. Find the average number of pages he read everyday. (Textbook pg. no. 67)

Solution:

$$60 + [50] + [54] + [46] + 50[5] = 260[5] = [52]$$

∴ Average number of pages read daily is 52



Maharashtra Board Solutions

Class 8 Maths

- Chapter 1- Rational and Irrational Numbers (Practice Set 1.1)
- Chapter 1- Rational and Irrational Numbers (Practice Set 1.2)
- Chapter 1- Rational and Irrational Numbers (Practice Set 1.3)
- Chapter 1- Rational and Irrational Numbers (Practice Set 1.4)
- Chapter 2- Parallel Lines and Transversals (Practice Set 2.1)
- Chapter 2- Parallel Lines and Transversals (Practice Set 2.2)
- Chapter 2- Parallel Lines and Transversals (Practice Set 2.3)
- Chapter 3- Indices and Cube Root (Practice Set 3.1)
- Chapter 3- Indices and Cube Root (Practice Set 3.2)
- Chapter 3- Indices and Cube Root (Practice Set 3.3)
- Chapter 4- Altitudes and Medians of a Triangle (Practice Set 4.1)
- Chapter 5- Expansion Formulae (Practice Set 5.1)
- Chapter 5- Expansion Formulae (Practice Set 5.2)
- Chapter 5- Expansion Formulae (Practice Set 5.3)
- Chapter 5- Expansion Formulae (Practice Set 5.4)
- Chapter 6- Factorisation of Algebraic Expressions (Practice Set 6.1)
- Chapter 6- Factorisation of Algebraic Expressions (Practice Set 6.2)
- Chapter 6- Factorisation of Algebraic Expressions (Practice Set 6.3)
- Chapter 6- Factorisation of Algebraic Expressions (Practice Set 6.4)
- Chapter 7- Variation (Practice Set 7.1)

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- Chapter 7- Variation (Practice Set 7.2)
- Chapter 7- Variation (Practice Set 7.3)
- Chapter 8- Quadrilateral: Constructions and Types (Practice Set 8.1)
- Chapter 8- Quadrilateral: Constructions and Types (Practice Set 8.2)
- Chapter 8- Quadrilateral: Constructions and Types (Practice Set 8.3)
- Chapter 9- Discount and Commission (Practice Set 9.1)
- Chapter 9- Discount and Commission (Practice Set 9.2)
- Chapter 10- Division of Polynomials (Practice Set 10.1)
- Chapter 10- Discount and Commission (Practice Set 10.2)
- Chapter 11- Statistics (Practice Set 11.1)
- Chapter 11- Statistics (Practice Set 11.2)
- Chapter 11- Statistics (Practice Set 11.3)
- Chapter 12- Equations in One Variable (Practice Set 12.1)
- Chapter 12- Equations in One Variable (Practice Set 12.2)
- Chapter 13- Congruence of Triangles (Practice Set 13.1)
- Chapter 13- Congruence of Triangles (Practice Set 13.2)
- Chapter 14- Compound Interest (Practice Set 14.1)
- Chapter 14- Compound Interest (Practice Set 14.2)
- Chapter 15- Area (Practice Set 15.1)
- Chapter 15- Area (Practice Set 15.2)
- Chapter 15- Area (Practice Set 15.3)
- Chapter 15- Area (Practice Set 15.4)
- Chapter 15- Area (Practice Set 15.5)
- Chapter 15- Area (Practice Set 15.6)
- Chapter 16- Surface Area and Volume (Practice Set 16.1)

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- Chapter 16- Surface Area and Volume (Practice Set 16.2)
- Chapter 16- Surface Area and Volume (Practice Set 16.3)
- Chapter 17- Factorisation of Algebraic Expressions (Practice Set 17.1)
- Chapter 17- Factorisation of Algebraic Expressions (Practice Set 17.2)

About About Maharashtra State Board (MSBSHSE)

The Maharashtra State Board of Secondary and Higher Secondary Education or MSBSHSE (Marathi: महाराष्ट्र राज्य माध्यमिक आणि उच्च माध्यमिक शिक्षण मंडळ), is an **autonomous and statutory body established in 1965**. The board was amended in the year 1977 under the provisions of the Maharashtra Act No. 41 of 1965.

The Maharashtra State Board of Secondary & Higher Secondary Education (MSBSHSE), Pune is an independent body of the Maharashtra Government. There are more than 1.4 million students that appear in the examination every year. The Maha State Board conducts the board examination twice a year. This board conducts the examination for SSC and HSC.

The Maharashtra government established the Maharashtra State Bureau of Textbook Production and Curriculum Research, also commonly referred to as Ebalbharati, in 1967 to take up the responsibility of providing quality textbooks to students from all classes studying under the Maharashtra State Board. MSBHSE prepares and updates the curriculum to provide holistic development for students. It is designed to tackle the difficulty in understanding the concepts with simple language with simple illustrations. Every year around 10 lakh students are enrolled in schools that are affiliated with the Maharashtra State Board.

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FAQs

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Who developed the Maharashtra State board books?

As of now, the MSCERT and Balbharti are responsible for the syllabus and textbooks of Classes 1 to 8, while Classes 9 and 10 are under the Maharashtra State Board of Secondary and Higher Secondary Education (MSBSHSE).

How many state boards are there in Maharashtra?

The Maharashtra State Board of Secondary & Higher Secondary Education, conducts the HSC and SSC Examinations in the state of Maharashtra through its nine Divisional Boards located at Pune, Mumbai, Aurangabad, Nasik, Kolhapur, Amravati, Latur, Nagpur and Ratnagiri.

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