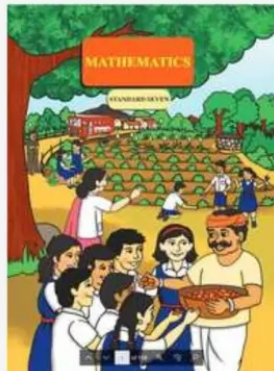


Maharashtra Board Solutions Class 7-Maths

(Practice Set 38): Chapter 9- Direct Proportion and Inverse Proportion

BOOK SOLUTIONS
CLASS 7
MATHS

CHAPTER 9
Direct Proportion and Inverse Proportion





Maharashtra Board Solutions→

For any clarifications or questions you can write to info@indcareer.com

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Maharashtra Board Solutions Class 7-Maths

(Practice Set 38): Chapter 9- Direct Proportion and Inverse Proportion

Class 7: Maths Chapter 9 solutions. Complete Class 7 Maths Chapter 9 Notes.

Maharashtra Board Solutions Class 7-Maths (Practice Set 38): Chapter 9- Direct Proportion and Inverse Proportion

Maharashtra Board 7th Maths Chapter 9, Class 7 Maths Chapter 9 solutions

Question 1.

Five workers take 12 days to weed a field. How many days would 6 workers take? How many would 15 take?

Solution:

Let 6 workers take x days and 15 workers take y days to weed the field.

The number of workers and the time required to weed the field are in inverse proportion.

$$\therefore 6 \times x = 5 \times 12$$

$$\therefore x = 5 \times 12 / 6$$

$$\therefore x = 10 \text{ days}$$

$$\text{Also, } 15 \times y = 5 \times 12$$

$$\therefore y = 5 \times 12 / 15$$

$$= 4 \text{ days}$$

$\therefore$ 6 workers will take 10 days and 15 workers will take 4 days to weed the field.

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Question 2.

Mohanrao took 10 days to finish a book, reading 40 pages every day. How many pages must he read in a day to finish it in 8 days?

Solution:

Let Mohanrao read x pages every day to finish the book in 8 days.

The number of pages read per day and the days required to finish the book are in inverse proportion.

$$\therefore 8 \times x = 10 \times 40$$

$$\therefore x = 10 \times 40 \div 8$$

$$= 50$$

$\therefore$ Mohanrao will have to read 50 pages every day to finish the book in 8 days.

Question 3.

Mary cycles at 6 km per hour. How long will she take to reach her Aunt's house which is 12 km away? If she cycles at a speed of 4 km/hr, how long would she take?

Solution:

Speed of the cycle = 6 km / hr

Distance travelled to reach her Aunt's house = 12 km

$$\therefore \text{Time required} = \frac{\text{Distance travelled}}{\text{Speed}}$$

$$= \frac{12}{6}$$

$$= 2 \text{ hours}$$

Let the time required when the speed of the cycle is 4 km/hr be x hours.

The speed of the cycle and the time required to travel the same distance are in inverse proportion.

$$\therefore 4 \times x = 6 \times 2$$

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$$\therefore x = 6 \times 24 = 3 \text{ hours}$$

$\therefore$ Mary will require 2 hours if she is cycling at 6 km/hr and 3 hours if she is cycling at 4 km/hr to reach her Aunt's house.

Question 4.

The stock of grain in a government warehouse lasts 30 days for 4000 people. How many days will it last for 6000 people?

Solution:

Let the stock of grain last for x days for 6000 people.

The number of people and the days for which stock will last are in inverse proportion.

$$\therefore 6000 \times x = 4000 \times 30$$

$$\therefore x = \frac{4000 \times 30}{6000} = 20$$

$\therefore$ The stock of grain will last for 20 days for 6000 people.

Intext Questions and Activities

Question 1.

Students of a certain school went for a picnic to a farm by bus. Here are some of their experiences. Say whether the quantities in each are in direct or in inverse proportion.

(Textbook pg. no. 65 and 66)

i. Each student paid Rs 60 for the expenses.

As there were 45 students, ___ rupees were collected.

Had there been 50 students, ___ rupees would have been collected.

The number of students and money collected are in ___ proportion.

ii. The sweets shop near the school gave 90 laddoos for the picnic.

If 45 students go for the picnic, each will get ___ laddoos.

If 30 students go for the picnic, each will get ___ laddoos.

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The number of students and that of laddoos each one gets are in ___ proportion.

iii. The farm is 120 km away from the school.

The bus went to the farm at a speed of 40 km per hour and took ___ hours.

On the return trip, the speed was 60 km per hour. Therefore, it took ___ hours.

The speed of the bus and the time it takes are in ___ proportion.

iv. The farmer picked 180 bors from his trees.

He gave them equally to 45 students. Each student got ___ bors.

Had there been 60 students, each would have got ___ bors.

The number of students and the number of bors each one gets are in ___ proportion.

Solution:

i. Rs 2700, Rs 3000, direct

ii. 2,3, inverse

iii. 3,2, inverse

iv. 4,3, inverse



Maharashtra Board Solutions

Class 7 Maths

- Chapter 1- Geometrical Constructions (Practice Set 1)
- Chapter 1- Geometrical Constructions (Practice Set 2)
- Chapter 1- Geometrical Constructions (Practice Set 3)
- Chapter 1- Geometrical Constructions (Practice Set 4)
- Chapter 1- Geometrical Constructions (Practice Set 5)
- Chapter 1- Geometrical Constructions (Practice Set 6)
- Chapter 1- Geometrical Constructions (Practice Set 7)
- Chapter 2- Multiplication and Division of Integers (Practice Set 8)
- Chapter 2- Multiplication and Division of Integers (Practice Set 9)
- Chapter 3- HCF and LCM (Practice Set 10)
- Chapter 3- HCF and LCM (Practice Set 11)
- Chapter 3- HCF and LCM (Practice Set 12)
- Chapter 3- HCF and LCM (Practice Set 13)
- Chapter 3- HCF and LCM (Practice Set 14)
- Chapter 4- Angles and Pairs of Angles (Practice Set 15)
- Chapter 4- Angles and Pairs of Angles (Practice Set 16)
- Chapter 4- Angles and Pairs of Angles (Practice Set 17)
- Chapter 4- Angles and Pairs of Angles (Practice Set 18)
- Chapter 4- Angles and Pairs of Angles (Practice Set 19)
- Chapter 4- Angles and Pairs of Angles (Practice Set 20)
- Chapter 4- Angles and Pairs of Angles (Practice Set 21)

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- Chapter 5- Operations on Rational Numbers (Practice Set 22)
- Chapter 5- Operations on Rational Numbers (Practice Set 23)
- Chapter 5- Operations on Rational Numbers (Practice Set 24)
- Chapter 5- Operations on Rational Numbers (Practice Set 25)
- Chapter 6- Indices (Practice Set 26)
- Chapter 6- Indices (Practice Set 27)
- Chapter 6- Indices (Practice Set 28)
- Chapter 6- Indices (Practice Set 29)
- Chapter 6- Indices (Practice Set 30)
- Chapter 7- Joint Bar Graph (Practice Set 31)
- Chapter 8- Algebraic Expressions and Operations on them (Practice Set 32)
- Chapter 8- Algebraic Expressions and Operations on them (Practice Set 33)
- Chapter 8- Algebraic Expressions and Operations on them (Practice Set 34)
- Chapter 8- Algebraic Expressions and Operations on them (Practice Set 35)
- Chapter 8- Algebraic Expressions and Operations on them (Practice Set 36)
- Chapter 9- Direct Proportion and Inverse Proportion (Practice Set 37)
- Chapter 9- Direct Proportion and Inverse Proportion (Practice Set 38)
- Chapter 9- Direct Proportion and Inverse Proportion (Practice Set 39)
- Chapter 10- Bank and Simple Interest (Practice Set 40)
- Chapter 10- Bank and Simple Interest (Practice Set 41)
- Chapter 11- Circle (Practice Set 42)

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- Chapter 11- Circle (Practice Set 43)
- Chapter 12- Perimeter and Area (Practice Set 44)
- Chapter 12- Perimeter and Area (Practice Set 45)
- Chapter 12- Perimeter and Area (Practice Set 46)
- Chapter 12- Perimeter and Area (Practice Set 47)
- Chapter 13- Pythagoras Theorem (Practice Set 48)
- Chapter 13- Pythagoras Theorem (Practice Set 49)
- Chapter 14- Algebraic Formulae - Expansion of Squares (Practice Set 50)
- Chapter 14- Algebraic Formulae - Expansion of Squares (Practice Set 51)
- Chapter 14- Algebraic Formulae - Expansion of Squares (Practice Set 52)
- Chapter 14- Algebraic Formulae - Expansion of Squares (Practice Set 53)
- Chapter 15- Statistics (Practice Set 54)
- Chapter 14- Statistics (Practice Set 55)

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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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