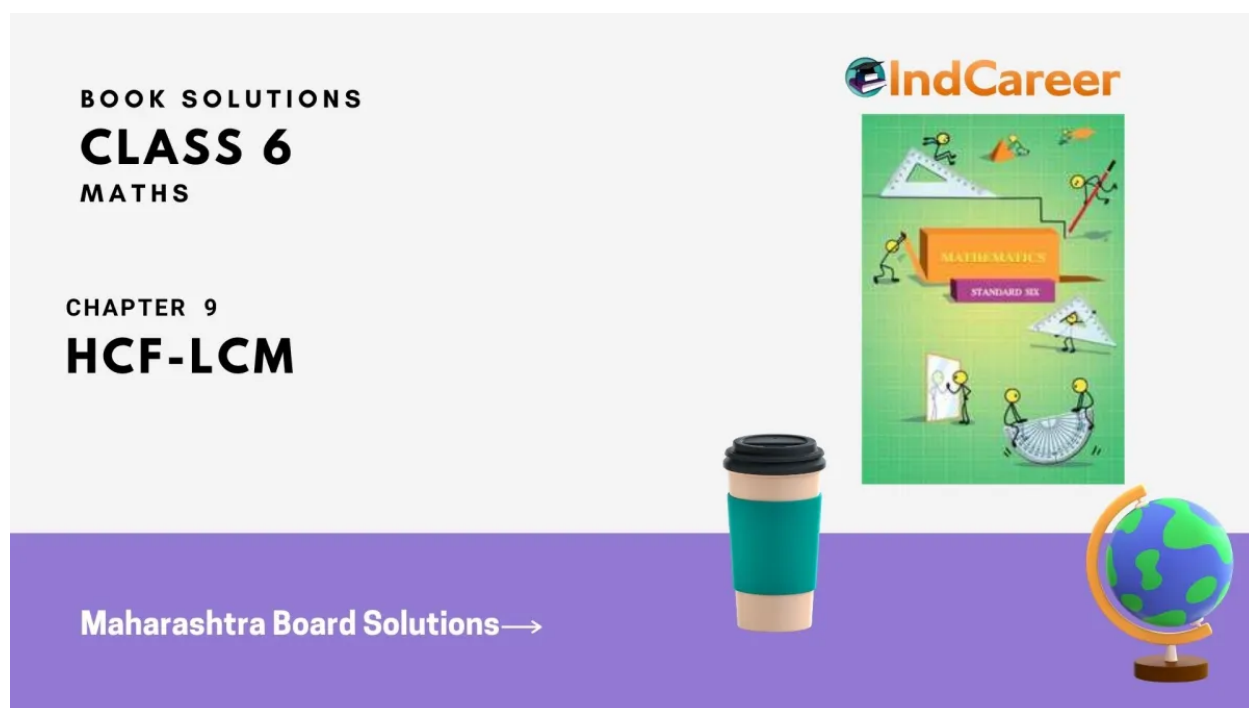


Maharashtra Board Solutions Class 6-Maths

(Practice Set 24): Chapter 9- HCF-LCM



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Postal Address

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Maharashtra Board Solutions Class 6-Maths

(Practice Set 24): Chapter 9- HCF-LCM

Class 6: Maths Chapter 9 solutions. Complete Class 6 Maths Chapter 9 Notes.

Maharashtra Board Solutions Class 6-Maths (Practice Set 24): Chapter 9- HCF-LCM

Maharashtra Board 6th Maths Chapter 9, Class 6 Maths Chapter 9 solutions

Question 1.

Find the HCF of the following numbers.

- i. 45, 30
- ii. 16, 48
- iii. 39, 25
- iv. 49, 56
- v. 120, 144
- vi. 81, 99
- vii. 24, 36
- viii. 25, 75
- ix. 48, 54
- x. 150, 225

Solution:

- i. Factors of 45 = 1, 3, 5, 9, 15, 45

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Factors of 30 = 1, 2, 3, 5, 6, 10, 15, 30

∴ HCF of 45 and 30 = 15

ii. Factors of 16 = 1, 2, 4, 8, 16

Factors of 48 = 1, 2, 3, 4, 6, 8, 12, 16, 24, 48

∴ HCF of 16 and 48 = 16

iii. Factors of 39 = 1, 3, 13, 39

Factors of 25 = 1, 5, 25

∴ HCF of 39 and 25 = 1

iv. Factors of 49 = 1, 7, 49

Factors of 56 = 1, 2, 4, 7, 8, 14, 28, 56

∴ HCF of 49 and 56 = 7

v. Factors of 120 = 1, 2, 3, 4, 5, 6, 8, 10, 12, 15, 20, 24, 30, 40, 60, 120

Factors of 144 = 1, 2, 3, 4, 6, 8, 9, 12, 16, 18, 24, 36, 48, 72, 144

∴ HCF of 120 and 144 = 24

vi. Factors of 81 = 1, 3, 9, 27, 81

Factors of 99 = 1, 3, 9, 11, 33, 99

∴ HCF of 81 and 99 = 9

vii. Factors of 24 = 1, 2, 3, 4, 6, 8, 12, 24

Factors of 36 = 1, 2, 3, 4, 6, 9, 12, 18, 36

∴ HCF of 24 and 36 = 12

viii. Factors of 25 = 1, 5, 25

Factors of 75 = 1, 3, 5, 15, 25, 75

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$\therefore$ HCF of 25 and 75 = 25

ix. Factors of 48 = 1, 2, 3, 4, 6, 8, 12, 16, 24, 48

Factors of 54 = 1, 2, 3, 6, 9, 18, 27, 54

$\therefore$ HCF of 48 and 54 = 6

x. Factors of 150 = 1, 2, 3, 5, 6, 10, 15, 25, 30, 50, 75, 150

Factors of 225 = 1, 3, 5, 9, 15, 25, 45, 75, 225

$\therefore$ HCF of 150 and 225 = 75

Question 2.

If large square beds of equal size are to be made for planting vegetables on a plot of land 18 metres long and 15 metres wide, what is the maximum possible length of each bed?

Solution:

Length of the land = 18 m

Width of the land = 15 m

The maximum length of each bed will be the greatest common factor of 18 and 15.

Factors of 18 = 1, 2, 3, 6, 9, 18

Factors of 15 = 1, 3, 5, 15

$\therefore$ HCF of 18 and 15 = 3

$\therefore$ The maximum possible length of each bed is 3 metres.

Question 3.

Two ropes, one 8 metres long and the other 12 metres long are to be cut into pieces of the same length. What will the maximum possible length of each piece be?

Solution:

Length of first rope = 8 m

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Length of second rope = 12 m

The maximum length of each piece will be the greatest common factor of 8 and 12.

Factors of 8 = 1, 2, 4, 8

Factors of 12 = 1, 2, 3, 4, 6, 12

$\therefore$ HCF of 8 and 12 = 4

$\therefore$ The maximum possible length of each piece is 4 metres.

Question 4.

The number of students of Std 6th and Std 7th who went to visit the Tadoba Tiger Project at Chandrapur was 140 and 196 respectively. The students of each class are to be divided into groups of the same number of students. Each group can have a paid guide. What is the maximum number of students that can be there in each group? Why do you think each group should have the maximum possible number of students?

Solution:

Number of students of Std 6th = 140

Number of students of Std 7th = 196

The maximum number of students in each group will be the greatest common factor of 140 and 196.

Factors of 140 = 1, 2, 4, 5, 7, 10, 14, 20, 28, 35, 70, 140

Factors of 196 = 1, 2, 4, 7, 14, 28, 49, 98, 196

$\therefore$ HCF of 140 and 196 = 28

$\therefore$ Maximum students in each group are 28.

Each group should have maximum number students so that there will be minimum number of groups and hence minimum number of paid guides.

Question 5.

At the Rice Research Centre at Tumsar there are 2610 kg of seeds of the basmati variety and 1980 kg of the indrayani variety. If the maximum possible weight of seeds has to be
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filled to make bags of equal weight what would be the weight of each bag? How many bags of each variety will there be?

Solution:

Weight of basmati rice = 2610 kg

Weight of indrayani rice = 1980 kg

The weight of each bag will be the greatest common factor of 2610 and 1980.

Factors of 2610 = 1, 2, 3, 5, 6, 9, 10, 15, 18, 29, 30, 45, 58, 87, 90, 145, 174, 261, 290, 435, 522, 870, 1305, 2610

Factors of 1980 = 1, 2, 3, 4, 5, 6, 9, 10, 11, 12, 15, 18, 20, 22, 30, 33, 36, 44, 45, 55, 60, 66, 90, 99, 110, 132, 165, 180, 198, 220, 330, 396, 495, 660, 990, 1980

$\therefore$ HCF of 2610 and 1980 = 90

Maximum weight of each bag = 90 kg

Number of bags of basmati rice = $2610 \div 90 = 29$

Number of bags of indrayani rice = $1980 \div 90 = 22$

Maximum weight of each bag is 90 kg.

The number of bags of basmati rice is 29, and the number of bags of indrayani rice is 22.



Maharashtra Board Solutions

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- Chapter 1- Basic Concepts in Geometry (Practice Set 1)
- Chapter 2- Angles (Practice Set 2)
- Chapter 2- Angles (Practice Set 3)
- Chapter 3- Integers (Practice Set 4)
- Chapter 3- Integers (Practice Set 5)
- Chapter 3- Integers (Practice Set 6)
- Chapter 3- Integers (Practice Set 7)
- Chapter 3- Integers (Practice Set 8)
- Chapter 4- Operations on Fractions (Practice Set 9)
- Chapter 4- Operations on Fractions (Practice Set 10)
- Chapter 4- Operations on Fractions (Practice Set 11)
- Chapter 4- Operations on Fractions (Practice Set 12)
- Chapter 4- Operations on Fractions (Practice Set 13)
- Chapter 5- Decimal Fractions (Practice Set 14)
- Chapter 5- Decimal Fractions (Practice Set 15)
- Chapter 5- Decimal Fractions (Practice Set 16)
- Chapter 5- Decimal Fractions (Practice Set 17)
- Chapter 6- Bar Graphs (Practice Set 18)
- Chapter 6- Bar Graphs (Practice Set 19)
- Chapter 7- Symmetry (Practice Set 20)
- Chapter 7- Symmetry (Practice Set 21)
- Chapter 8- Divisibility (Practice Set 22)

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- Chapter 9- HCF-LCM (Practice Set 23)
- Chapter 9- HCF-LCM (Practice Set 24)
- Chapter 9- HCF-LCM (Practice Set 25)
- Chapter 10- Equations (Practice Set 26)
- Chapter 10- Equations (Practice Set 27)
- Chapter 11- Ratio-Proportion (Practice Set 28)
- Chapter 11- Ratio-Proportion (Practice Set 29)
- Chapter 12- Percentage (Practice Set 30)
- Chapter 13- Profit-Loss (Practice Set 31)
- Chapter 13- Profit-Loss (Practice Set 32)
- Chapter 13- Profit-Loss (Practice Set 33)
- Chapter 13- Profit-Loss (Practice Set 34)
- Chapter 14- Banks and Simple Interest (Practice Set 35)
- Chapter 15- Triangles and their Properties (Practice Set 36)
- Chapter 16- Quadrilaterals (Practice Set 37)
- Chapter 16- Quadrilaterals (Practice Set 38)
- Chapter 17- Geometrical Constructions (Practice Set 39)
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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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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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IndCareer.com
52, Shilpa Nagar,
Somalwada
Nagpur - 440015
Maharashtra, India

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