

Maharashtra Board Solutions Class 6-Maths

(Practice Set 28): Chapter 11-

Ratio-Proportion



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

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Maharashtra Board Solutions Class 6-Maths

(Practice Set 28): Chapter 11-

Ratio-Proportion

Class 6: Maths Chapter 11 solutions. Complete Class 6 Maths Chapter 11 Notes.

Maharashtra Board Solutions Class 6-Maths (Practice Set 28): Chapter 11- Ratio-Proportion

Maharashtra Board 6th Maths Chapter 11, Class 6 Maths Chapter 11 solutions

Question 1.

In each example below, find the ratio of the first number to the second:

i. 24, 56

ii. 63, 49

iii. 52, 65

iv. 84, 60

v. 35, 65

vi. 121, 99

Solution:

i. 24, 56

$$\frac{24}{56} = \frac{24 \div 8}{56 \div 8} = \frac{3}{7} \quad \frac{24}{56} = 24 \div 56 \div 8 = 37$$

$$= 3:7$$

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ii. 63, 49

$$\frac{63}{49} = \frac{63 \div 7}{49 \div 7} = \frac{9}{7} \quad 63:49 = 63 \div 7 : 49 \div 7 = 9:7$$

iii. 52, 65

$$\frac{52}{65} = \frac{52 \div 13}{65 \div 13} = \frac{4}{5} \quad 52:65 = 52 \div 13 : 65 \div 13 = 4:5$$

iv. 84, 60

$$\frac{84}{60} = \frac{84 \div 12}{60 \div 12} = \frac{7}{5} \quad 84:60 = 84 \div 12 : 60 \div 12 = 7:5$$

v. 35, 65

$$\frac{35}{65} = \frac{35 \div 5}{65 \div 5} = \frac{7}{13} \quad 35:65 = 35 \div 5 : 65 \div 5 = 7:13$$

vi. 121, 99

$$\frac{121}{99} = \frac{121 \div 11}{99 \div 11} = \frac{11}{9} \quad 121:99 = 121 \div 11 : 99 \div 11 = 11:9$$

Question 2.

Find the ratio of the first quantity to the second.

i. 25 beads, 40 beads

ii. Rs 40, Rs 120

iii. 15 minutes, 1 hour

iv. 30 litres, 24 litres

v. 99 kg, 44000 grams

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vi. 1 litre, 250 ml

vii. 60 paise, 1 rupee

viii. 750 grams, $\frac{1}{2}$ kg

ix. 125 cm, 1 metre

Solution:

i. Required Ratio = $\frac{25}{40} = \frac{25 \div 5}{40 \div 5} = \frac{5}{8}$

ii. Required Ratio = $\frac{40}{120} = \frac{40 \div 40}{120 \div 40} = \frac{1}{3}$

iii. 1 hour = 60 minutes

Required Ratio = $\frac{15}{60} = \frac{15 \div 15}{60 \div 15} = \frac{1}{4}$

iv. Required Ratio = $\frac{30}{24} = \frac{30 \div 6}{24 \div 6} = \frac{5}{4}$

v. 99 kg = 99 x 1000 grams = 99000 grams

Required Ratio = $\frac{99000}{44000} = \frac{99000 \div 1000}{44000 \div 1000} = \frac{99}{44}$

$= \frac{99}{44} = \frac{99 \div 11}{44 \div 11} = \frac{9}{4}$

vi. 1 litre, 250 ml

1 litre = 1000 ml

Required Ratio = $\frac{1000}{250} = \frac{1000 \div 10}{250 \div 10} = \frac{100}{25}$

$= \frac{100}{25} = \frac{100 \div 25}{25 \div 25} = \frac{4}{1}$

viii. 750 grams, $\frac{1}{2}$ kg

$\frac{1}{2}$ kg = $\frac{1000}{2}$ grams = 500 grams

Required Ratio = $\frac{750}{500} = \frac{750 \div 10}{500 \div 10} = \frac{75}{50}$

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$$= \frac{75}{50} = \frac{75 \div 25}{50 \div 25} = \frac{3}{2} \quad 75 \div 25 = 3 \quad 50 \div 25 = 2$$

ix. 125 cm, 1 metre

1 metre = 100 cm

$$\text{Required Ratio} = \frac{125}{100} = \frac{125 \div 25}{100 \div 25} = \frac{5}{4} \quad 125 \div 25 = 5 \quad 100 \div 25 = 4$$

Question 3.

Reema has 24 notebooks and 18 books. Find the ratio of notebooks to books.

Solution:

Ratio of notebooks to books

$$\begin{aligned} &= \frac{\text{Total number of notebooks}}{\text{Total number of books}} \\ &= \frac{24}{18} = \frac{24 \div 6}{18 \div 6} = \frac{4}{3} \end{aligned}$$

$\therefore$ The ratio of notebooks to books with Reema is $\frac{4}{3}$

Question 4.

30 cricket players and 20 kho-kho players are training on a field. What is the ratio of cricket players to the total number of players?

Solution:

Total number of players = Cricket players + Kho-kho players

$$= 30 + 20 = 50$$

Ratio of cricket players to the total number of players

$$\begin{aligned} &= \frac{\text{Number of cricket players}}{\text{Total number of players}} \\ &= \frac{30}{50} = \frac{30 \div 10}{50 \div 10} = \frac{3}{5} \end{aligned}$$

∴ The ratio of cricket players to the total number of players is $\frac{3}{5}$.

Question 5.

Snehal has a red ribbon that is 80 cm long and a blue ribbon 2.20 m long. What is the ratio of the length of the red ribbon to that of the blue ribbon?

Solution:

1 metre = 100 cm

Length of the red ribbon = 80 cm

Length of the blue ribbon = 2.20 m = 2.20 × 100 cm

$$\begin{aligned} &= \frac{220}{100} \times \frac{100}{1} = \frac{220 \times 100}{100 \times 1} \\ &= 220 \end{aligned}$$

∴ Ratio of length of the red ribbon to that of the blue ribbon

$$\begin{aligned} &= \frac{\text{Length of red ribbon}}{\text{Length of blue ribbon}} \\ &= \frac{80 \text{ cm}}{220 \text{ cm}} = \frac{80 \div 20}{220 \div 20} = \frac{4}{11} \end{aligned}$$

∴ The ratio of the length of the red ribbon to that of the blue ribbon is $\frac{4}{11}$.

Question 6.

Shubham's age today is 12 years and his father's is 42 years. Shubham's mother is younger than his father by 6 years. Find the following ratios.

i. Ratio of Shubham's age today to his mother's age today.

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- ii. Ratio of Shubham's mother's age today to his father's age today.
- iii. The ratio of Shubham's age to his mother's age when Shubham was 10 years old.

Solution:

Shubham's age today = 12 years

Shubham's father's age = 42 years

Shubham's mother age = Shubham's father's age – 6 years

= 42 years – 6 years = 36 years

- i. Ratio of Shubham's age today to his mother's age today

$$\begin{aligned} &= \frac{\text{Shubham's age today}}{\text{Shubham's Mother's age today}} \\ &= \frac{12}{36} = \frac{12 \div 12}{36 \div 12} = \frac{1}{3} \end{aligned}$$

∴ The ratio of Shubham's age today to his mother's age today is $\frac{1}{3}$.

- ii. Ratio of Shubham's mother age today to his father's age today

$$\begin{aligned} &= \frac{\text{Shubham's mother's age today}}{\text{Shubham's father's age today}} \\ &= \frac{36}{42} = \frac{36 \div 6}{42 \div 6} = \frac{6}{7} \end{aligned}$$

∴ The ratio of Shubham's mother's age today to his father's age today is $\frac{6}{7}$.

- iii. Shubham's age today is 12 years and his mother's age is 36 years.

Hence when Shubham's age was 10 years, his mother's age was 34 years (i.e. 36 – 2 years).

Ratio of Shubham's age to his mother's age when Shubham was 10 years old

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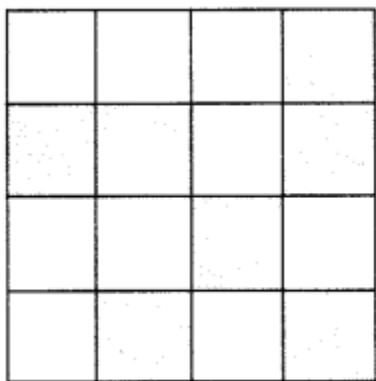
$$= \frac{\text{Shubham's age}}{\text{Shubham's mother's age}} = \frac{10}{34} = \frac{10 \div 2}{34 \div 2} = \frac{5}{17}$$

∴ The ratio of Shubham's age to his mother's age when Shubham was 10 years old is $\frac{5}{17}$

Questions and Activities

Question 1.

In the figure, colour some squares with any colour you like and leave some blank.
(Textbook pg. no. 57)



- Count all the boxes and write the number.
- Count the colored ones and write the number.
- Count the blank ones and write the number.
- Find the ratio of the colored boxes to the blank ones.
- Find the ratio of the colored boxes to the total boxes.
- Find the ratio of the blank boxes to the total boxes.

Solution:

- The number of all boxes is 16.
- The number of colored boxes is 7.

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iii. The number of blank boxes is 9.

iv. Ratio of the colored boxes to the blank ones

$$= \frac{\text{Number of coloured boxes}}{\text{Number of blank boxes}} = \frac{7}{9}$$

v. Ratio of the colored boxes to the total boxes

$$= \frac{\text{Number of coloured boxes}}{\text{Number of total boxes}} = \frac{7}{16}$$

vi. Ratio of the blank boxes to the total boxes

$$= \frac{\text{Number of blank boxes}}{\text{Number of total boxes}} = \frac{9}{16}$$



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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)
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- Chapter 5- Decimal Fractions (Practice Set 14)
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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)
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- 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)
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- Chapter 17- Geometrical Constructions (Practice Set 40)
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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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