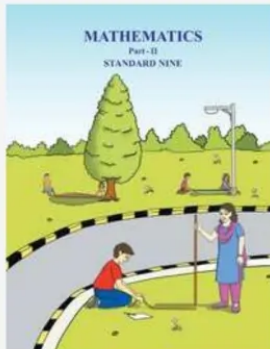


Maharashtra Board Solutions Class 9-Maths

(Part 2): Chapter 3.5- Triangles

BOOK SOLUTIONS
CLASS 9
MATHS (PART 2)

CHAPTER 3.5
Triangles



Maharashtra Board Solutions→

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Maharashtra Board Solutions Class 9-Maths

(Part 2): Chapter 3.5- Triangles

Class 9: Maths Chapter 3.5 solutions. Complete Class 9 Maths Chapter 3.5 Notes.

Maharashtra Board Solutions Class 9-Maths (Part 2): Chapter 3.5- Triangles

Maharashtra Board 9th Maths Chapter 3.5, Class 9 Maths Chapter 3.5 solutions

Question 1.

If $\Delta XYZ \sim \Delta LMN$, write the corresponding angles of the two triangles and also write the ratios of corresponding sides.

Solution:

$\Delta XYZ \sim \Delta LMN$ [Given]

$$\therefore \angle X \cong \angle L$$

$$\angle Y \cong \angle M$$

$$\angle Z \cong \angle N \text{ [Corresponding angles of similar triangles]}$$

$$\frac{XY}{LM} = \frac{YZ}{MN} = \frac{XZ}{LN} \text{ [Corresponding sides of similar triangles]}$$

Question 2.

In ΔXYZ , $XY = 4$ cm, $YZ = 6$ cm, $XZ = 5$ cm. If $\Delta XYZ \sim \Delta PQR$ and $PQ = 8$ cm, then find the lengths of remaining sides of ΔPQR .

Solution:

$\Delta XYZ \sim \Delta PQR$ [Given]

$$\therefore \frac{XY}{PQ} = \frac{YZ}{QR} = \frac{XZ}{PR} \text{ [Corresponding sides of similar triangles]}$$

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$$\therefore \frac{4}{8} = \frac{6}{QR} = \frac{5}{PR} \quad (i)$$

$$\text{Now, } \frac{4}{8} = \frac{6}{QR}$$

$$\therefore QR = \frac{6 \times 8}{4}$$

$$\therefore QR = 12 \text{ cm}$$

$$\text{ii. Also, } \frac{4}{8} = \frac{5}{PR} \quad [\text{From (i)}]$$

$$\therefore PR = \frac{5 \times 8}{4}$$

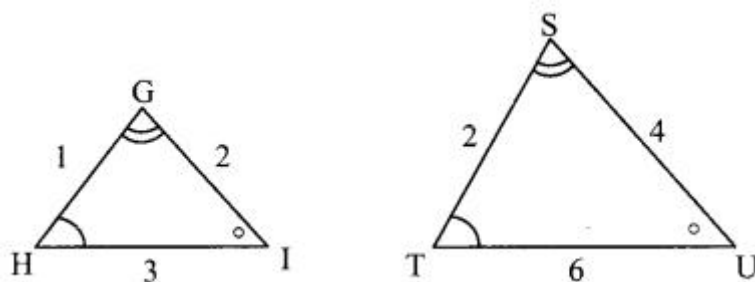
$$\therefore PR = 10 \text{ cm}$$

$$\therefore QR = 12 \text{ cm, } PR = 10 \text{ cm}$$

Question 3.

Draw a sketch of a pair of similar triangles. Label them. Show their corresponding angles by the same signs. Show the lengths of corresponding sides by numbers in proportion.

Solution:



$$\Delta GHI \sim \Delta STU$$

Question 1.

We have learnt that if two triangles are equiangular then their sides are in proportion. What do you think if two quadrilaterals are equiangular? Are their

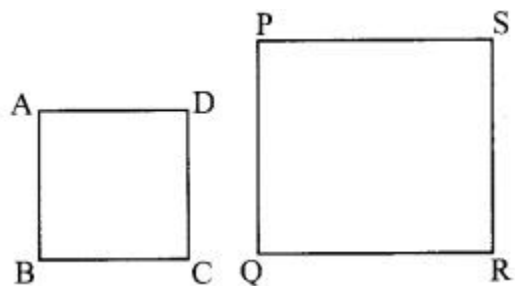
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sides in proportion? Draw different figures and verify. Verify the same for other polygons. (Textbook pg no 50)

Answer:

If two quadrilaterals are equiangular then their sides will not necessarily be in proportion.

Case 1: The two quadrilaterals are of the same type.

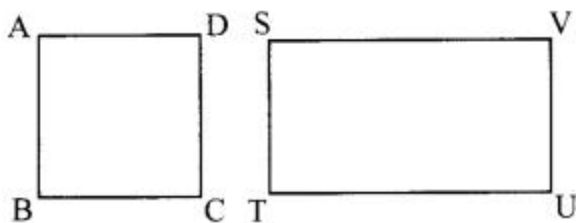


Consider squares ABCD and PQRS.

$$\angle A = \angle P, \angle B = \angle Q, \angle C = \angle R, \angle D = \angle S$$

$$ABPQ = BCQR = CDRS = ADPS$$

Case 2: The two quadrilaterals are of different types.



Consider square ABCD and rectangle STUV.

$$\angle A = \angle S, \angle B = \angle T, \angle C = \angle U, \angle D = \angle V$$

$$\text{Now, } \frac{AB}{ST} = \frac{CD}{UV} \text{ and } \frac{BC}{TU} = \frac{AD}{SV}$$

$$\text{But } \frac{AB}{ST} \neq \frac{BC}{TU}$$

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Class 9 Maths

Part 2

- Chapter 1.1- Basic Concepts in Geometry
- Chapter 1.2- Basic Concepts in Geometry
- Chapter 1.3- Basic Concepts in Geometry
- Chapter 2.1- Parallel Lines
- Chapter 2.2- Parallel Lines
- Chapter 3.1- Triangles
- Chapter 3.2- Triangles
- Chapter 3.3- Triangles
- Chapter 3.4- Triangles
- Chapter 3.5- Triangles
- Chapter 4.1- Constructions of Triangles
- Chapter 4.2- Constructions of Triangles
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- Chapter 5.1- Quadrilaterals
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- Chapter 5.5- Quadrilaterals
- Chapter 6.1- Circle
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- Chapter 9.1- Surface Area and Volume
- Chapter 9.2- Surface Area and Volume
- Chapter 9.3- Surface Area and Volume

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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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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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