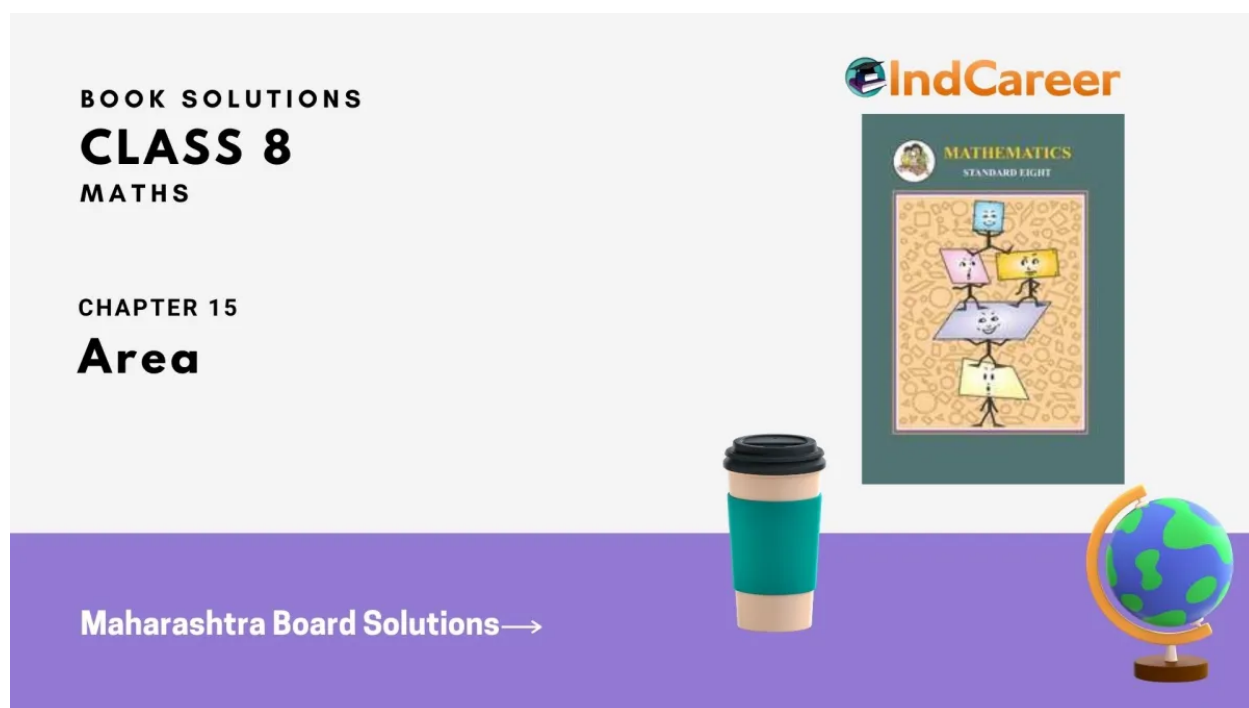


Maharashtra Board Solutions Class 8-Maths

(Practice Set 15.4): Chapter 15- Area



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

Postal Address

IndCareer.com, 52, Shilpa Nagar, Somalwada Nagpur - 440015
Maharashtra, India

WhatsApp: +91 9561 204 888, **Website:** <https://www.indcareer.com>

<https://www.indcareer.com/schools/maharashtra-board-solutions-class-8-maths-practice-set-15-4-chapter-15-area/>



Maharashtra Board Solutions Class 8-Maths

(Practice Set 15.4): Chapter 15- Area

Class 8: Maths Chapter 15 solutions. Complete Class 8 Maths Chapter 15 Notes.

Maharashtra Board Solutions Class 8-Maths (Practice Set 15.4): Chapter 15- Area

Maharashtra Board 8th Maths Chapter 15, Class 8 Maths Chapter 15 solutions

Question 1.

Sides of a triangle are 45 cm, 39 cm and 42 cm, find its area.

Solution:

Sides of a triangle are 45 cm, 39 cm and 42 cm.

Here, $a = 45\text{cm}$, $b = 39\text{cm}$, $c = 42\text{cm}$

Semi perimeter of triangle = $s = \frac{1}{2}(a+b+c)$

$$= \frac{1}{2}(45+39+42)$$

$$= 63$$

$$= 63$$

Area of a triangle

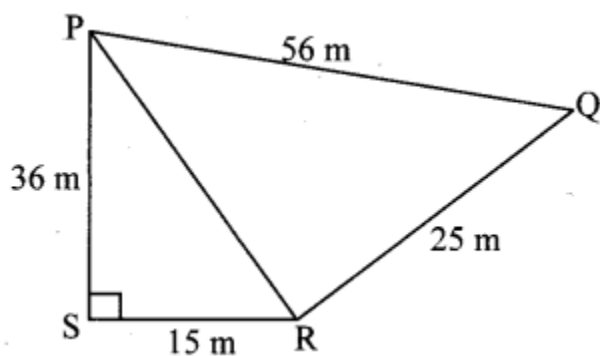
<https://www.indcareer.com/schools/maharashtra-board-solutions-class-8-maths-practice-set-15-4-chapter-15-area/>

$$\begin{aligned}
 &= \sqrt{s(s-a)(s-b)(s-c)} \\
 &= \sqrt{63(63-45)(63-39)(63-42)} \\
 &= \sqrt{63 \times 18 \times 24 \times 21} \\
 &= \sqrt{7 \times 9 \times 2 \times 9 \times 2 \times 2 \times 2 \times 3 \times 3 \times 7} \\
 &= \sqrt{7^2 \times 9^2 \times 2^2 \times 2^2 \times 3^2} \\
 &= 7 \times 9 \times 2 \times 2 \times 3 \\
 &= 756 \text{ sq. cm}
 \end{aligned}$$

∴ The area of the triangle is 756 sq.cm.

Question 2.

Look at the measures shown in the given figure and find the area of □ PQRS.



Solution:

$$A(\square PQRS) = A(\triangle PSR) + A(\triangle PQR)$$

In $\triangle PSR$, $l(PS) = 36 \text{ m}$, $l(SR) = 15 \text{ m}$

$$A(\triangle PSR)$$

= 12 x product of sides forming the right angle

$$= 12 \times l(SR) \times l(PS)$$

$$= 12 \times 15 \times 36$$

<https://www.indcareer.com/schools/maharashtra-board-solutions-class-8-maths-practice-set-15-4-chapter-15-area/>

$$= 270 \text{ sq.m}$$

$$\text{In } \triangle PSR, m\angle PSR = 90^\circ$$

$$[l(PR)]^2 = [l(PS)]^2 + [l(SR)]^2$$

...[Pythagoras theorem]

$$= (36)^2 + (15)^2$$

$$= 1296 + 225$$

$$\therefore l(PR)^2 = 1521$$

$$\therefore l(PR) = 39\text{m}$$

...[Taking square root of both sides]

$$\text{In } \triangle PQR, a = 56\text{m}, b = 25\text{m}, c = 39\text{m}$$

$$\begin{aligned}\text{Semiperimeter of } \triangle PQR = s &= \frac{1}{2} (a + b + c) \\ &= \frac{56 + 25 + 39}{2} \\ &= \frac{120}{2} \\ &= 60\end{aligned}$$

$$\begin{aligned}\therefore A(\triangle PQR) &= \sqrt{s(s-a)(s-b)(s-c)} \\ &= \sqrt{60(60-56)(60-25)(60-39)} \\ &= \sqrt{60 \times 4 \times 35 \times 21} \\ &= \sqrt{3 \times 4 \times 5 \times 4 \times 5 \times 7 \times 3 \times 7} \\ &= \sqrt{3^2 \times 4^2 \times 5^2 \times 7^2} \\ &= 3 \times 4 \times 5 \times 7 \\ &= 420 \text{ sq. m}\end{aligned}$$

$$A(\square PQRS) = A(\triangle PSR) + A(\triangle PQR)$$

<https://www.indcareer.com/schools/maharashtra-board-solutions-class-8-maths-practice-set-15-4-chapter-15-area/>

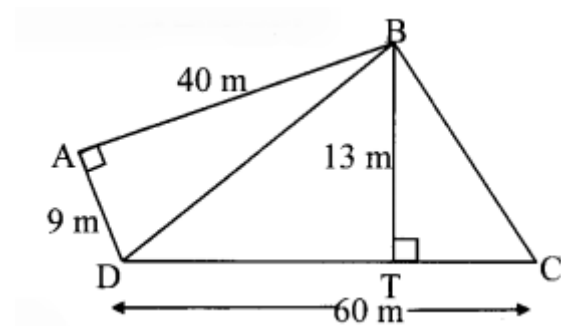
$$= 270 + 420$$

$$= 690 \text{ sq. m}$$

$\therefore$ The area of $\square PQRS$ is 690 sq.m

Question 3.

Some measures are given in the figure, find the area of $\square ABCD$.



Solution:

$$A(\square ABCD) = A(\triangle BAD) + A(\triangle BDC)$$

In $\triangle BAD$, $m\angle BAD = 90^\circ$, $l(AB) = 40\text{m}$, $l(AD) = 9\text{m}$

$A(\triangle BAD) = 12 \times \text{product of sides forming the right angle}$

$$= 12 \times l(AB) \times l(AD)$$

$$= 12 \times 40 \times 9$$

$$= 180 \text{ sq. m}$$

In $\triangle BDC$, $l(BT) = 13\text{m}$, $l(CD) = 60\text{m}$

$A(\triangle BDC) = 12 \times \text{base} \times \text{height}$

$$= 12 \times l(CD) \times l(BT)$$

$$= 12 \times 60 \times 13$$

$$= 390 \text{ sq. m}$$

<https://www.indcareer.com/schools/maharashtra-board-solutions-class-8-maths-practice-set-15-4-chapter-15-area/>

$$A(\square ABCD) = A(\triangle BAD) + A(\triangle BDC)$$

$$= 180 + 390$$

$$= 570 \text{ sq. m}$$

$\therefore$ The area of $\square ABCD$ is 570 sq.m.



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)

<https://www.indcareer.com/schools/maharashtra-board-solutions-class-8-maths-practice-set-15-4-chapter-15-area/>

- 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)

<https://www.indcareer.com/schools/maharashtra-board-solutions-class-8-maths-practice-set-15-4-chapter-15-area/>

- 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)

<https://www.indcareer.com/schools/maharashtra-board-solutions-class-8-maths-practice-set-15-4-chapter-15-area/>

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.

<https://www.indcareer.com/schools/maharashtra-board-solutions-class-8-maths-practice-set-15-4-chapter-15-area/>

FAQs

Where do I get the Maharashtra State Board Books PDF For free download?

You can download the Maharashtra State Board Books from the eBalbharti official website, i.e. cart.ebalbharati.in or from this article.

Add image

How to Download Maharashtra State Board Books?

Students can get the Maharashtra Books for primary, secondary, and senior secondary classes from here. You can view or download the Maharashtra State Board Books from this page or from the official website for free of cost. Students can follow the detailed steps below to visit the official website and download the e-books for all subjects or a specific subject in different mediums.

Step 1: Visit the official website ebalbharati.in

Step 2: On the top of the screen, select "Download PDF textbooks"

Step 3: From the "Classes" section, select your class.

Step 4: From "Medium", select the medium suitable to you.

Step 5: All Maharashtra board books for class 11th will now be displayed on the right side.

Step 6: Click on the "Download" option to download the PDF book.

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.

<https://www.indcareer.com/schools/maharashtra-board-solutions-class-8-maths-practice-set-15-4-chapter-15-area/>

About IndCareer

IndCareer.com is a leading developer of online career guidance resources for the Indian marketplace. Established in 2007, IndCareer.com is currently used by over thousands of institutions across India, including schools, employment agencies, libraries, colleges and universities.

IndCareer.com is designed to assist you in making the right career decision - a decision that meets your unique interests and personality.

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

Postal Address

IndCareer.com
52, Shilpa Nagar,
Somalwada
Nagpur - 440015
Maharashtra, India

WhatsApp: +91 9561 204 888

Website: <https://www.indcareer.com>

<https://www.indcareer.com/schools/maharashtra-board-solutions-class-8-maths-practice-set-15-4-chapter-15-area/>