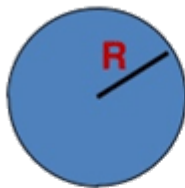


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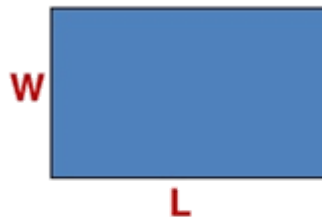
NCERT Class 8 Mathematics Solutions: Chapter 11 – Mensuration Exercise 11.2 Part 8 (For CBSE, ICSE, IAS, NET, NRA 2022)

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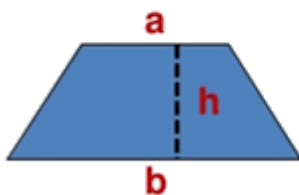
Area Formulas for Prism Bases



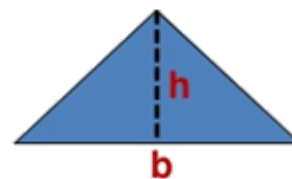
$$\text{Area of Circle} = \pi \times R^2$$



$$\text{Area of Rectangle} = \text{Length} \times \text{Width}$$

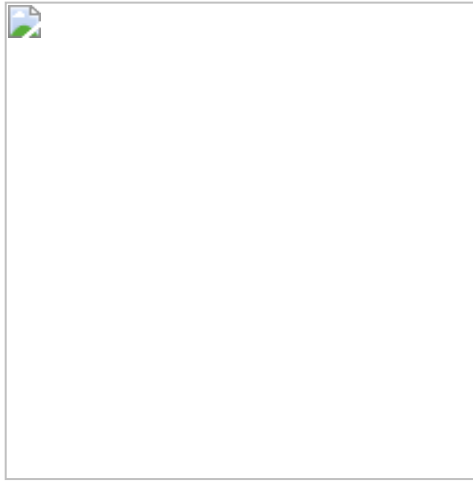


$$\text{Area of Trapezium} = \frac{1}{2} \times (a + b) \times h$$



$$\text{Area of Triangle} = \frac{1}{2} \times \text{base} \times \text{height}$$

1. Diagram of the adjacent picture frame has outer dimensions = 24 cm × 28 cm and inner dimensions 16 cm × 20 cm . Find the area of each section of the frame, if the width of each section is same.



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Answer:

Two of given figures (I) and (II) are similar in dimensions.

And also figures (III) and (IV) are similar in dimensions.

$$\therefore \text{Area of figure (I)} = \text{Area of trapezium} = \frac{1}{2}(a + b) \times h$$

$$= \frac{1}{2}(28 + 20) \times 4$$

$$= \frac{1}{2} \times 48 \times 4$$

$$= 96 \text{ cm}^2$$

Also,

$$\text{Area of figure (ii)} = 96 \text{ cm}^2$$

Now,

$$\begin{aligned}\text{Area of figure (III)} &= \text{Area of trapezium} = \frac{1}{2}(a + b) \times h \\ &= \frac{1}{2}(24 + 16) \times 4 \\ &= \frac{1}{2} \times 40 \times 4 \\ &= 80 \text{ cm}^2\end{aligned}$$

Also,

$$\text{Area of figure (iv)} = 80 \text{ cm}^2$$

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