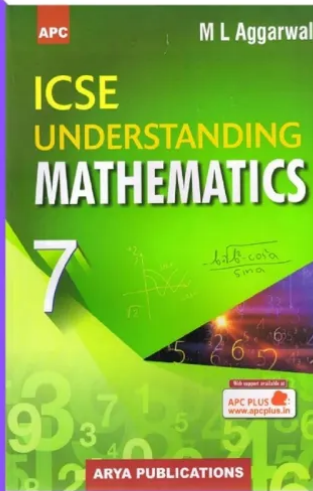


ML Aggarwal Solutions for Class 7 Maths

Chapter 16- Perimeter and Area



ML Agrawal Solutions

CLASS 7 MATHS

Chapter 16: Perimeter and
Area

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ML Aggarwal Solutions for Class 7 Maths

Chapter 16- Perimeter and Area

Class 7: Maths Chapter 16 solutions. Complete Class 7 Maths Chapter 16 Notes.

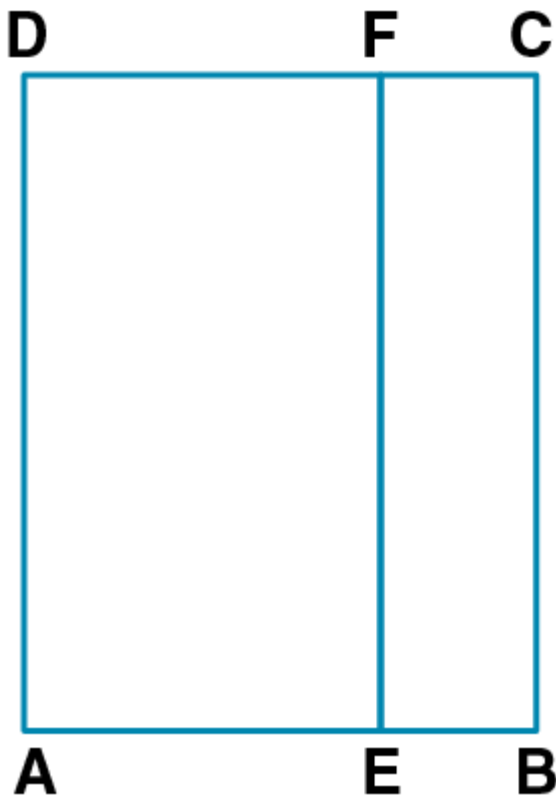
ML Aggarwal Solutions for Class 7 Maths Chapter 16- Perimeter and Area

ML Aggarwal 7th Maths Chapter 16, Class 7 Maths Chapter 16 solutions

1. ABCD is a square of side 24 cm. EF is parallel to BC and AE = 15 cm. By how much does

(i) the perimeter of AEFD exceed the perimeter of EBCF?

(ii) the area of AEFD exceed the area of EBCF?



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Solution:

Given

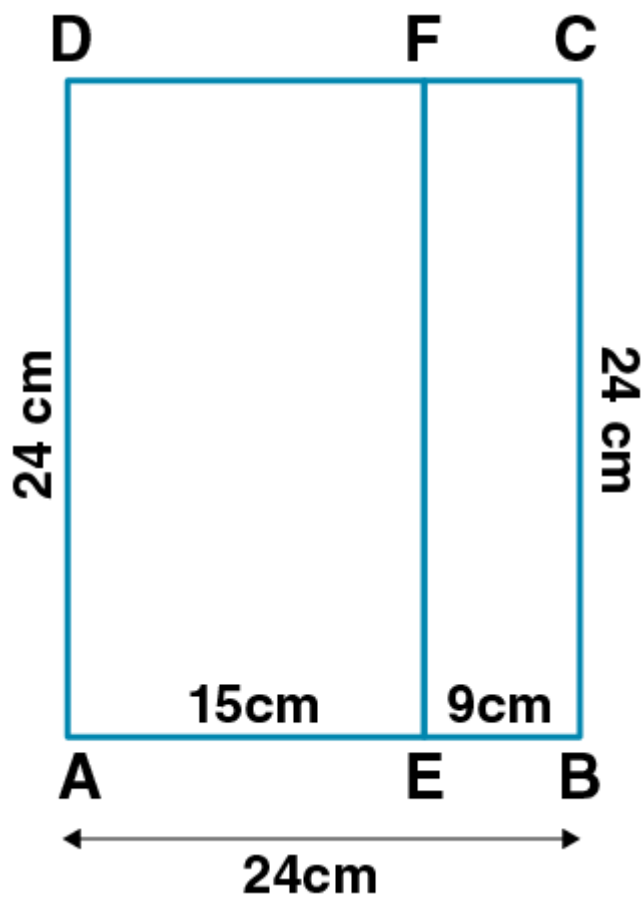
The side of the square ABCD = 24 cm

$EF \parallel BC \parallel AD$

AE is of length 15 cm

$EB = 24 - 15$

$EB = 9$ cm



(i) Perimeter of AEFD = $2 (15 + 24)$ cm

= $2 (39)$ cm

We get,

= 78 cm

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$$\text{Perimeter of EBCF} = 2 (9 + 24) \text{ cm}$$

$$= 2 (33) \text{ cm}$$

We get,

$$= 66 \text{ cm}$$

Now,

$$\text{Difference between the two perimeters} = 78 - 66$$

$$= 12 \text{ cm}$$

$$\text{(ii) Area of AEFD} = l \times b$$

$$= 15 \times 24$$

We get,

$$= 360 \text{ sq. cm}$$

$$\text{Area of EBCF} = 9 \times 24$$

$$= 216 \text{ sq. cm}$$

$$\text{Now, difference between the two areas} = 360 - 216$$

$$= 144 \text{ sq. cm}$$

2. Nagma runs around a rectangular park 180 m long and 120 m wide at the rate of 7.5 km/ hour. In how much time will she complete five rounds?

Solution:

$$\text{Length of rectangular plot (l)} = 180 \text{ m}$$

$$\text{Breadth of rectangular (b)} = 120 \text{ m}$$

$$\text{Perimeter} = 2 (l + b)$$

$$= 2 (180 + 120) \text{ m}$$

$$= 2 (300)$$

We get,

$$= 600 \text{ m}$$

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Distance travelled in 5 rounds = 600×5

= 3000 m i.e

= 3 km

Given speed = 7.5 km/hr

Time taken = $(3 / 7.5)$ h

= $\{(3 \times 10) / 75\}$ h

= $(30 / 75)$ h

We get,

= $(2 / 5)$ h

= $(2 / 5) \times 60$

= 2×12

= 24 minutes

3. The area of a rectangular plot is 540 m^2 , if its length is 27 m, find its breadth and perimeter.

Solution:

Given

Area of a rectangular plot = 540 m^2

Length (l) = 27 m

Therefore,

Breadth = (Area) / (Length)

= $(540 / 27)$ m

We get,

= 20 m

And Perimeter = $2 (l + b)$

= $2 (27 + 20)$ m

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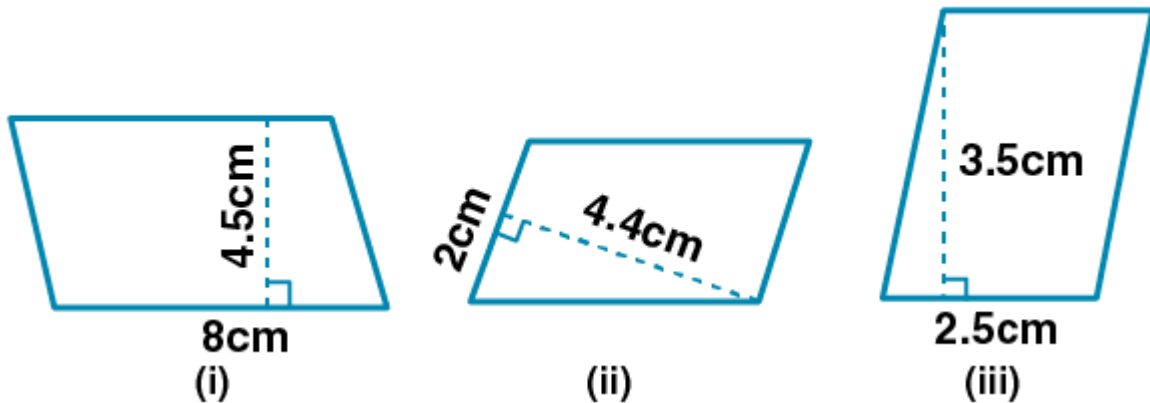
$$= 2 (47) \text{ m}$$

We get,

$$= 94 \text{ m}$$

Therefore, the breadth of the rectangular plot is 20 m and its perimeter is 94 m

4. Find the area of each of the following parallelogram:



Solution:

(i) Base of the parallelogram (b) = 8 cm and

Height of the parallelogram (h) = 4.5 cm

Area = Base $\times$ Height

$$= 8 \times 4.5$$

$$= 36 \text{ cm}^2$$

(ii) Base of the parallelogram (b) = 2 cm

Height of the parallelogram (h) = 4.4 cm

Area = Base $\times$ Height

$$= 2 \times 4.4$$

$$= 8.8 \text{ cm}^2$$

(iii) Base of the parallelogram (b) = 2.5 cm

Height of the parallelogram (h) = 3.5 cm

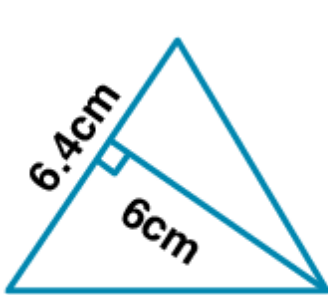
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Area = Base $\times$ Height

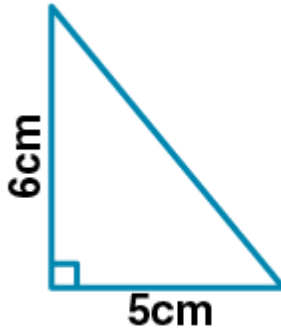
$$= 2.5 \times 3.5$$

$$= 8.75 \text{ cm}^2$$

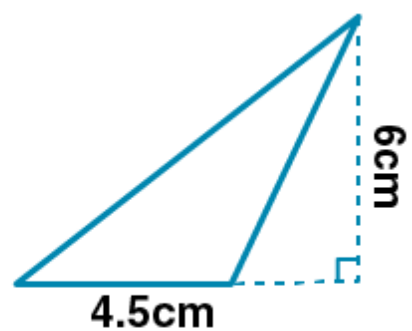
5. Find the area of each of the following triangles:



(i)



(ii)



(iii)

Solution:

(i) Base of the triangle (b) = 6.4 cm

Height of the triangle (h) = 6 cm

Area of the triangle = $(1/2) \times \text{base} \times \text{height}$

$$= (1/2) \times 6.4 \times 6 \text{ cm}^2$$

We get,

$$= 19.2 \text{ cm}^2$$

(ii) Base of the triangle (b) = 5 cm

Height of the triangle (h) = 6 cm

Area of the triangle = $(1/2) \times \text{base} \times \text{height}$

$$= (1/2) \times 5 \times 6$$

We get,

$$= 15 \text{ cm}^2$$

(iii) Base of the triangle (b) = 4.5 cm

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Height of the triangle (h) = 6 cm

Area of the triangle = $(1 / 2) \times \text{base} \times \text{height}$

$$= (1 / 2) \times 4.5 \times 6$$

We get,

$$= 13.5 \text{ cm}^2$$

6. Find the circumference of the circles with the following radius:

(i) 7 cm

(ii) 21 cm

(iii) 28 mm

(iv) 3.5 cm

Solution:

(i) Radius of the circle (r) = 7 cm

We know that,

Circumference of the circle = $2\pi r$

$$= 2 \times (22 / 7) \times 7$$

We get,

$$= 44 \text{ cm}$$

Hence, the circumference of the circle is 44 cm

(ii) Radius of the circle (r) = 21 cm

We know that,

Circumference of the circle = $2\pi r$

$$= 2 \times (22 / 7) \times 21$$

We get,

$$= 132 \text{ cm}$$

Hence, the circumference of the circle is 132 cm

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(iii) Radius of the circle (r) = 28 mm

We know that,

Circumference of the circle = $2\pi r$

$$= 2 \times (22 / 7) \times 28$$

We get,

$$= 176 \text{ mm}$$

Hence, the circumference of the circle is 176 mm

(iv) Radius of the circle = 3.5 cm

We know that,

Circumference of the circle = $2\pi r$

$$= 2 \times (22 / 7) \times 3.5$$

We get,

$$= 22 \text{ cm}$$

Hence, the circumference of the circle is 22 cm

7. Find the area of the circles, given that:

(i) radius = 14 mm

(ii) diameter = 49 m

(iii) diameter = 9.8 m

(iv) radius = 5 cm

Solution:

(i) Radius (r) = 14 mm

Hence,

$$\text{Area} = \pi r^2$$

$$= (22 / 7) \times 14 \times 14$$

We get,

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$$= 616 \text{ cm}^2$$

Therefore, the area of the circle is 616 cm^2

(ii) Diameter = 49 m

Hence,

$$\text{Radius} = (49 / 2) \text{ m}$$

$$\text{Area} = \pi r^2$$

$$= (22 / 7) \times (49 / 2) \times (49 / 2)$$

We get,

$$= 3773 \text{ m}^2$$

Therefore, the area of the circle is 3773 m^2

(iii) Diameter = 9.8 m

Hence,

$$\text{Radius} = (9.8 / 2)$$

$$= 4.9 \text{ m}$$

$$\text{Area} = \pi r^2$$

$$= (22 / 7) \times 4.9 \times 4.9$$

We get,

$$= 75.46 \text{ m}^2$$

Therefore, the area of the circle is 75.46 m^2

(iv) Radius = 5 cm

$$\text{Area} = \pi r^2$$

$$= (22 / 7) \times 5 \times 5$$

We get,

$$= (550 / 7)$$

=

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$$78\frac{4}{7}\text{cm}^2$$



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- Chapter 7- Percentage and Its Applications
- Chapter 8- Algebraic Expressions
- Chapter 9- Linear Equations and Inequalities
- Chapter 10- Lines and Angles
- Chapter 11- Triangles and its Properties
- Chapter 12- Congruence of Triangles
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- Chapter 14- Symmetry
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- Chapter 17- Data Handling

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About ML Aggarwal

M. L. Aggarwal, is an Indian mechanical engineer, educator. His achievements include research in solutions of industrial problems related to fatigue design. Recipient Best Paper award, Manipal Institute of Technology, 2004. Member of TSTE.

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