MATHEMATICS

Class-7th

Chapter-11

Perimeter and Area

Exercise-11.4

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Mathematics

Class - VII Ch - 11. Perimeter and Area.

Ex - 11.4 IVth. part

Q. 8. Sol.

Circumference of circle = $2\pi r$.

$= 2 \times 3.14 \times 4$ cm

$= 25.12$ cm.

Perimeter of square box of side 4 cm.

$= 4 \times$ side

$= 4 \times 4 = 16$ cm.

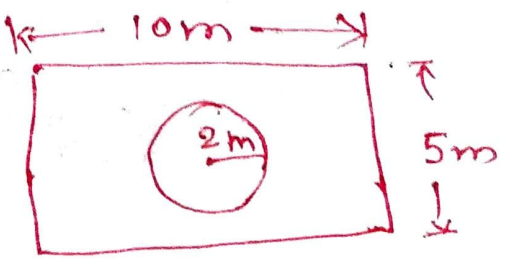
Here, we see that length of cord used to wrap on circular pipe is more than used cord on sq. box. So, she has some part is left of cord.

Now, remaining part of cord

$= (25.12 - 16.00)$ cm

$= 9.12$ cm. Ans.

Q. 9. Sol.



(i) Length of rect. -

Lawn = 10m & b = 5m.

So, Area of whole land

$= l \times b$

$= 10 \times 5 \ m^2$

$= 50 \ m^2$

(ii) Radius of circular flower bed

$r = 2 \ cm$.

So, its Area $= \pi r^2$

$= 3.14 \times (2)^2$

$= 3.14 \times 2 \times 2$

$= 12.56 \ m^2$.

(iii) Ar. of the lawn excluding the area of the flowerbed

$=$ ar. of lawn $-$ ar. of flower bed.

$= 50 - 12.56 \ m^2$

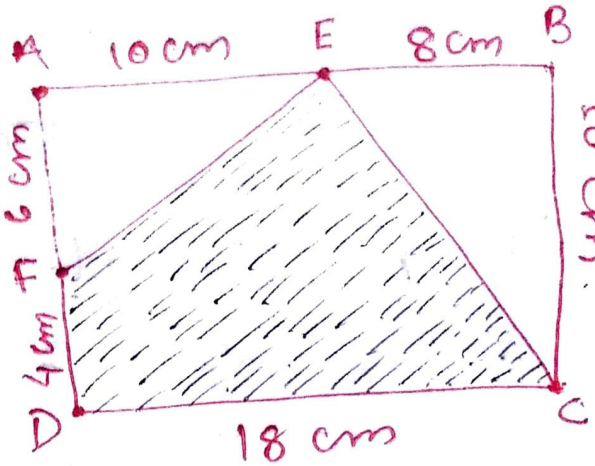
$= 37.44 \ m^2$

(iv) Circumference of the flower bed

$= 2\pi r = 2 \times 3.14 \times 2$

$= 12.56 \ m$. Ans.

Q. 10. ✓



Area of rectangle ABCD = $l \times b$

$= 18 \times 10\ cm^2$

$= 180\ cm^2$. — (i)

Area of right triangle EAF

$= \frac{1}{2} \times AE \times AF$

$= \frac{1}{2} \times 10^{5} \times 6$

$= 30\ cm^2$ — (ii)

Area of right triangle EBC

$= \frac{1}{2} \times BC \times BE$

$= \frac{1}{2} \times 10^{5} \times 8$

$= 40\ cm^2$ — (iii)

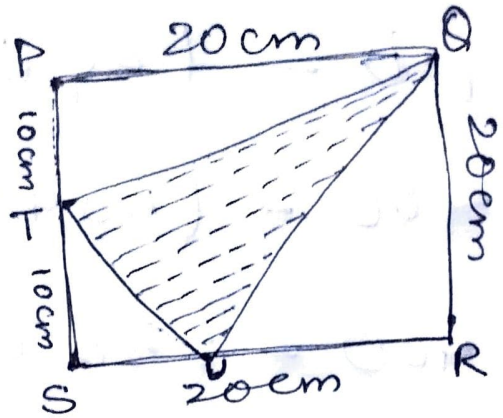
Now, Area of shaded portion EFDC

= eq (i) − (eq ii + eq iii)

$= [180 - (30 + 40)]\ cm^2$

$= 110\ cm^2$ Ans. ✓

(ii) Sol.



In fig. all sides of quadrilateral PQRS are at right angles and

$SR = 20\,cm$ & $QR = 20\,cm$.

Hence, PQRS is a square.

Now, Area of Sq. PQRS = $(side)^2$

$= (20)^2 = 400\,cm^2$ — (i).

Area of isosceles right triangle TSU

$= \frac{1}{2} \times ST \times SU$

$= \frac{1}{2} \times 10 \times 10$

$= 50\,cm^2$ — (ii)

Here, measure of two triangles QRU & QPT are equal.

So, 2 x area of right triangle QRU

$= 2 \times \frac{1}{2} \times UR \times QR$

$= 2 \times \frac{1}{2} \times 10 \times 20$

$= 200\,cm^2$ — (iii)

Hence, Area of shaded portion = →

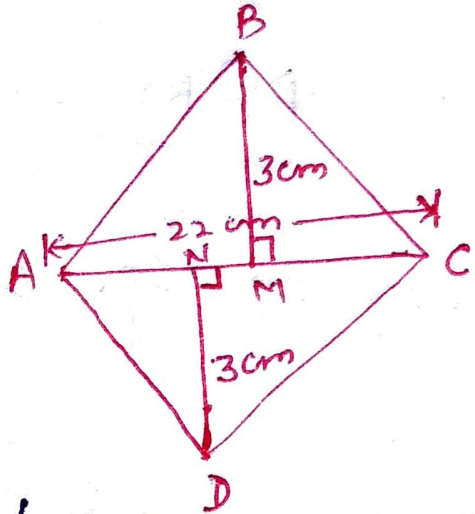
eq (i) − (eq. ii + eq iii)

$= [400 - (50 + 200)]\ cm^2$

$= 400 - 250\ cm^2$

$= 150\ cm^2$ Ans.

Q. 11. Sol:



Area of quadrilateral ABCD = ar. of $\triangle ABC$ + ar. of $\triangle ADC$

$= \frac{1}{2} \times AC \times BM + \frac{1}{2} \times AC \times DN.$

$= \frac{1}{2} \times AC (BM + DN)$

$= \frac{1}{2} \times 22 (3 + 3)\ cm$

$= \frac{1}{2} \times 22 \times 6$

$= \frac{1}{2} \times \overset{11}{\cancel{22}} \times 6$

$= 11 \times 6\ cm^2$

$= 66\ cm^2$.

Hence, Area of quadrilateral ABCD = $66\ cm^2$. Ans.

The End.

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