Mensuration Ex 20.3 Q1

Answer :

(i) There are 16 complete squares in the given shape.

$\because$ Area of one square = 1 cm^2

$\therefore$ Area of this shape = 16 $\times$ 1 = 16 cm^2

(ii) There are 36 complete squares in the given shape.

$\because$ Area of one square = 1 cm^2

$\therefore$ Area of 36 squares = 36 $\times$1 = 36 cm^2

(iii) There are 15 complete and 6 half squares in the given shape.

$\because$ Area of one square = 1 cm^2

$\therefore$ Area of this shape = $(15 + 6 \times \frac{1}{2}) = 18\ cm^2$

(iv) There are 20 complete and 8 half squares in the given shape.

$\because$ Area of one square = 1 cm^2

$\therefore$ Area of this shape = $(20 + 8 \times \frac{1}{2}) = 24\ cm^2$

(v) There are 13 complete squares, 8 more than half squares and 7 less than half squares in the given shape.

$\because$ Area of one square = 1 cm^2

$\therefore$ Area of this shape = $(13 + 8 \times 1) = 21\ cm^2$

(vi) There are 8 complete squares, 6 more than half squares and 4 less than half squares in the given shape.

$\because$ Area of one square = 1 cm^2

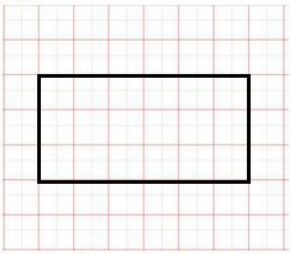
$\therefore$ Area of this shape = $(8 + 6 \times 1) = 14\ cm^2$

Mensuration Ex 20.3 Q2

Answer :

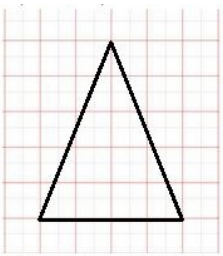
(i) A rectangle: This contains 18 complete squares.

If we assume that the area of one complete square is 1 cm^2, then the area of this rectangle will be 18 cm^2.



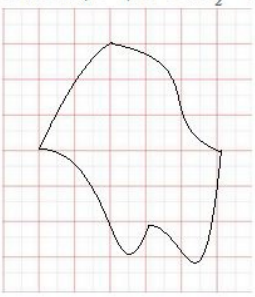
(ii) A triangle: This triangle contains 4 complete squares, 6 more than half squares and 6 less than half squares.

If we assume that the area of one complete square is 1 cm^2, then the area of this shape = $(4 + 6 \times 1) = 10\ cm^2$



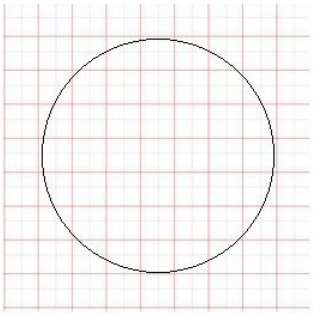
(iii) Any irregular figure: This figure consists of 10 complete squares, 1 exactly half square, 7 more than half squares and 6 less than half squares.

If we assume that the area of one complete square is 1 cm^2, then the area of this shape = $(10 + 1 \times \frac{1}{2} + 7 \times 1) = 17.5\ cm^2$



Mensuration Ex 20.3 Q3

Answer :



This circle on the squared paper consists of 21 complete squares, 15 more than half squares and 8 less than half squares.

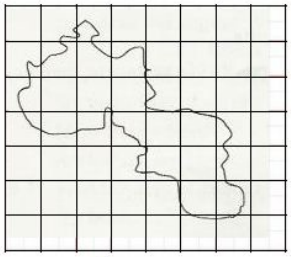
Let us assume that the area of 1 square is 1 cm^2.

If we neglect the less than half squares while approximating more than half square as equal to a complete square, we get:

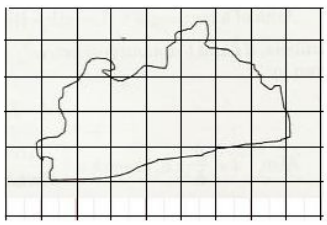
Area of this shape = $(21 + 15) = 36\ cm^2$

Mensuration Ex 20.3 Q4

Answer :



(i)



(ii)

Using tracing paper, we traced both the figures on a graph paper.

(i) This figure contains 4 complete squares, 9 more than half squares and 9 less than half squares.

Let us assume that the area of one square is 1 cm^2 .

If we neglect the less than half squares and consider the area of more than half squares as equal to area of complete square, we get:

Area of this shape = $(4 + 9) = 13\ cm^2$

(ii) This figure contains 8 complete squares, 11 more than half squares and 10 less than half squares.

Let us assume that the area of one square is 1 cm^2.

If we neglect the less than half squares and consider the area of more than half squares as equal to area of complete square, we get:

Area of this shape = $(8 + 11) = 19\ cm^2$

On comparing the areas of these two shapes, we get that the area of Fig. (ii) is more than that of Fig. (i).

********** END **********