

CHAPTER 11

Areas

Area of rectangle:

If the number of units in the length of a rectangle is multiplied by the number of units in its breadth then the product gives the number of square units in the area of rectangle.

Example:

Let PQRS represents a rectangle whose length $\overline{PQ} = 6$ units and breadth $\overline{QR}$ is 5 units.



Sol.

Now, divide $\overline{PQ}$ into 6 equal parts and $\overline{QR}$ into 5 equal parts and through the points of division of each line draw parallel to the other.

∴ The rectangle contains (6 units $\times$ 5 units) 30 square units.

Similarly, if the length of the rectangle is 'a' units and breadth is 'b' units then the area of rectangle is 'ab' square units.

That is 'Length $\times$ Breadth' square units gives the area of rectangle.

Observation:

- If we consider any two congruent figures, one figure will cover the other; it explains that congruent figures have equal areas.

Ex. Two triangles of same side length.

- If we take any two figures having same area may not be congruent.

Ex. A square of side 6 cm and a rectangle of dimensions 4 cm, 9 cm have equal areas but not congruent.