Online Class Supporting Materials

MALAPPURAM EDUCATIONAL DISTRICT

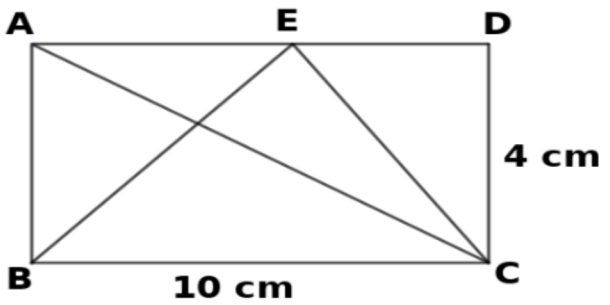
IX Maths(EM)-1.01

AREA

PREVIOUS KNOWLEDGE:

- The concept of Area
- Area of a rectangle = length x breadth
- Area of a triangle = ½ bh

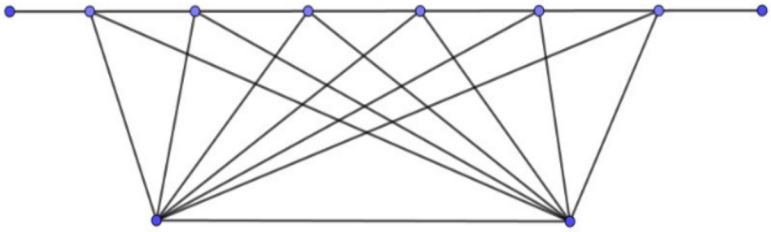
ACTIVITY : 1



1) In the figure, what is the area of the rectangle ABCD?
2) What type of the triangle is △ABC?
3) Find the area of △ABC.
4) In △BEC, what is the length of the perpendicular from E to BC?
5) Find the area of △BEC.
6) Draw another triangle of equal area with one side 6cm.

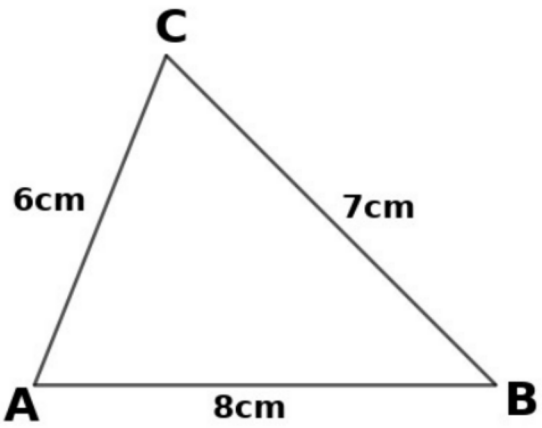
CONCLUSION:

Between two parallel lines, triangles with the same base have equal area.



In the figure, all the triangles have equal area

ACTIVITY:2



In the figure,
AB=8cm, BC=7cm, AC=6cm

1) **Draw an isosceles triangle of equal area.**
2) **Draw a right angled triangle of equal area.**
3) **Draw a triangle of equal area with one angle 60º.**

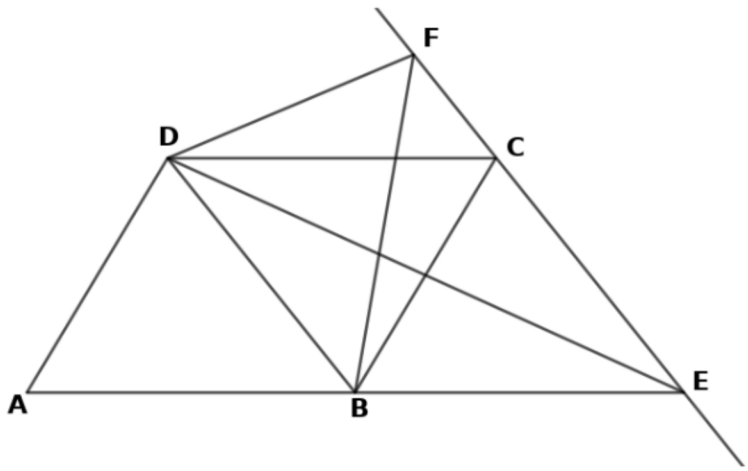
CONCLUSION:

Isosceles triangle, right angled triangle or any type of triangle can be constructed with equal area of a given triangle.

ACTIVITY : 3

1) **Draw a quadrilateral ABDC with AB=6cm, AC=5cm, BC=7cm,CD=4.5cm,BD=6.5cm.**
2) **Draw a line parallel to the diagonal BC through D.**
3) **Extend AB, and mark the point E, where this line intersects the parallel line.**
4) **Join CE.**
5) **Find a triangle of equal area of $\triangle$BCD.**
6) **Shade the triangle of equal area of the quadrilateral ABDC.**

ACTIVITY : 4



In the figure, BD is parallel to CE. The Area of the $\triangle$ABD is 20cm^2 and area of $\triangle$BCD is 12cm^2.

1)Find the area of the quadrilateral ABCD.

2)Find the area of $\triangle$BDE.

3)Find the area of the quadrilateral ABFD.

4)Find the area of $\triangle$AED.

CONCLUSION:

A triangle can be constructed with equal area of a quadrilateral.

ACTIVITY:5

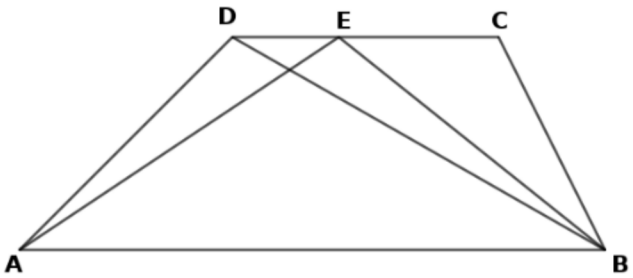
Draw a regular pentagon of sides 5 cm and then draw a triangle of equal area (Refer textbook).

CONCLUSION:

A triangle can be constructed with equal area of a pentagon.

WORK SHEET 1.01

1) In the figure, ABCD is a trapezium. It's area is 90 cm^2. Area of $\triangle$AEB is 70 cm^2.



1) What is the peculiarity of the sides AB and CD?
2) Find area of $\triangle$ADB.
3) Find area of $\triangle$BCD.

2) Draw a triangle of sides 3cm, 4cm and 5cm, and then draw an isosceles triangle of equal area with base 4 cm.

3) **Draw a quadrilateral PQRS with PQ=6cm, PS=5cm, QS=7cm, QR=5.5cm, SR=6.5cm and then draw a triangle of equal area.**

4) **Draw a pentagon of all sides 5cm and angles not equal, then draw a triangle of equal area of it.**