

SUBJECT: MATHEMATICS

CLASS: IX

CHAPTER NUMBER: 9

CHAPTER NAME: AREAS OF PARALLELOGRAM AND TRIANGLES

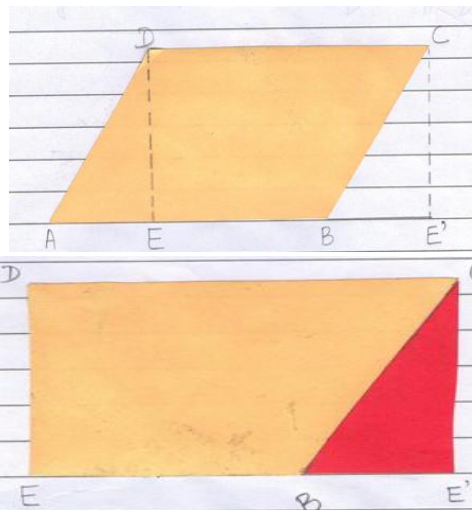
EXPERIENTIAL LEARNING ACTIVITY:

- Make a parallelogram ABCD by folding a paper.
- Cut out the parallelogram with the help of scissors.
- Obtain a perpendicular from D to AB meeting AB at E.
- Cut and Remove the triangle AED and align AD to E. Name the displaced segment AE as AE`.
- Verify using a scale that E, B, and E` are collinear.
- Verify that CE` is perpendicular to EBE` and EE` equal to CD.

Now the new figure is rectangle.

$$\begin{aligned}\therefore \text{ar(Parallelogram ABCD)} &= \text{ar(EE`CD)} \\ &= l \times b \\ &= EE` \times CE` \\ &= \text{Base} \times \text{Height}\end{aligned}$$

AREA OF PARALLELOGRAM



CURIOSITY QUESTIONS:

1. Compare a parallelogram and a Rectangle. How are they same? How are they different?
2. Can you guess what will be the area of a triangle and a parallelogram, if they are having common base and they lie between the same parallels?
3. If two Geometrical figures are having same area, will they be congruent?

THINK ABOUT:

1. When can you say, a parallelogram is a rectangle?
2. If one pair of opposite sides are equal and parallel in a Quadrilateral, will it be a parallelogram?
3. Show that the diagonals of a parallelogram divide it into four triangles of equal area.