

# Area of a Traingle

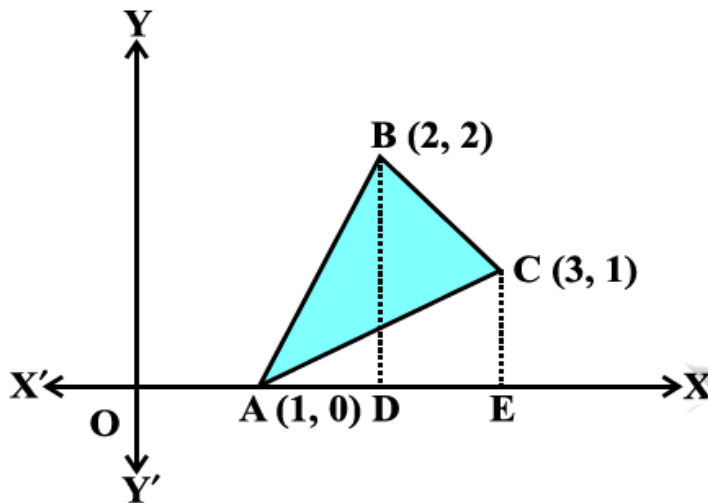
## 1 10<sup>th</sup> Maths - Chapter 7

All problems are from Exercise 7.3

1. Find the area of the triangle whose vertices are :
  - (a)  $((2, 3), (-1, 0), (2, -4))$
  - (b)  $(-5, -1), (3, -5), (5, 2)$
2. In each of the following, find the value of 'k', for which the points are collinear.
  - (a)  $(7, -2), (5, 1), (3, k)$
  - (b)  $(8, 1), (k, -4), (2, -5)$
3. Find the area of the triangle formed by joining the mid-points of the sides of the triangle whose vertices are  $(0, -1), (2, 1)$  and  $(0, 3)$ . Find the ratio of this area to the area of the given triangle.
4. Find the area of the quadrilateral whose vertices, taken in order, are  $(-4, -2), (-3, -5), (3, -2)$  and  $(2, 3)$ .
5. You have studied in Class IX, (Chapter 9, Example 3), that a median of a triangle divides it into two triangles of equal areas. Verify this result for  $\triangle ABC$  whose vertices are  $\vec{A}(4, -6), \vec{B}(3, -2)$  and  $\vec{C}(5, 2)$ .

## 2 12<sup>th</sup> Maths - Chapter 8

1. Using integration find the area of region bounded by the triangle whose vertices are  $(1, 0), (2, 2)$  and  $(3, 1)$ . (Ref : Example 9)



2. Using integration find the area of region bounded by the triangle whose vertices are  $(-1, 0)$ ,  $(1, 3)$  and  $(3, 2)$ . (Ref : Problem 4 in Ex 8.2)
3. Using the method of integration find the area of the  $\triangle ABC$ , coordinates of whose vertices are  $\vec{A}(2, 0)$ ,  $\vec{B}(4, 5)$  and  $\vec{C}(6, 3)$ . (Ref: Problem 13 in Misc Exercise on Chapter 8)