Coordinate Geometry

G.sai avinash (gsavinash@sriprakashschools.com)

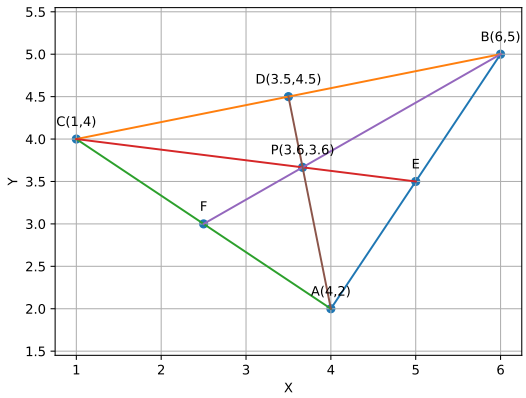
August 8, 2023

Class 10^{th} Maths - Chapter 7

This is Problem-7 from Exercise 7.4

1. Let A(4, 2), B(6,5) and C(1, 4) be the vertices of triangle ABC
   (ii)Find the coordinates of the point P on the AD, such that
   AP: PD = 2: 1.
   Solution: :

Construction



Median AD of the triangle will divide the side BC in two equal parts. So D is the midpoint of side BC

$$Coordinates of D = \left(\frac{(6+1)}{2} \quad , \frac{(5+4)}{2}\right) = \left(\frac{7}{2} \quad , \frac{9}{2}\right) \tag{0.0.1}$$

Point P divides the side AD in a ratio 2:1

$$cordinates of p == \left(\frac{2\times(\frac{7}{2})+1\times4}{2} \quad , \frac{2\times(\frac{9}{2})+1\times2}{2}\right) = \left(\frac{11}{3} \quad , \frac{11}{3}\right) \tag{0.0.2}$$