## Assignment-2

## AI24BTECH11002 - K.AKSHAY TEJA

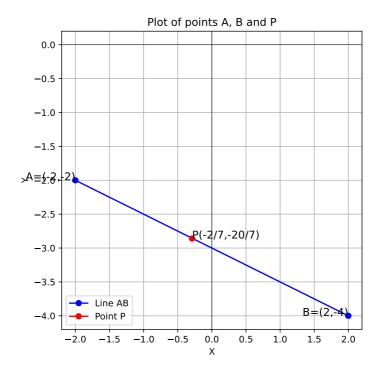
## 1 Vector Arithmetic

1) If the coordinates of points **A** and **B** are (-2, -2) and (2, -4) respectively, find the coordinates of **P** such that  $AP = \frac{3}{7}AB$ , and **P** lies on the line segment AB.

(10, 2015)

**Solution:** Given, coordinates of **A** are (-2, -2) and coordinates of **B** are (2, -4).**P** divides **AB** in ratio 3:4.So,  $k=\frac{3}{4}$ 

$$\implies \mathbf{P} = \frac{\frac{3}{4}\mathbf{B} + \mathbf{A}}{\frac{3}{4} + 1}$$
$$= \left(\frac{-2}{7}\right)$$



1