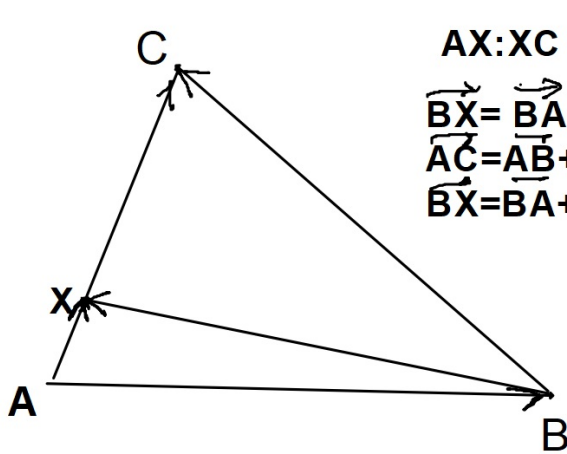




$$AX:XC = 2:7 \Rightarrow \vec{AX} = \frac{2}{9} \vec{AC}$$

$$\vec{BX} = \vec{BA} + \vec{AX} = \vec{BA} + \frac{2}{9} \vec{AC}$$

$$\vec{AC} = \vec{AB} + \vec{BC} \Rightarrow$$

$$\vec{BX} = \vec{BA} + \frac{2}{9}(\vec{AB} + \vec{BC})$$

$$\Rightarrow \vec{BX} = \vec{BA} + \frac{2}{9}(-\vec{BA} + \vec{BC})$$

$$\Rightarrow \vec{BX} = \frac{2}{9}\vec{BC} + \vec{BA} - \frac{2}{9}\vec{AB}$$

$$\Rightarrow \vec{BX} = \frac{2}{9}\vec{BC} + \frac{7}{9}\vec{BA}$$