

## exercice 150 :

$$\begin{aligned} 1) \quad \vec{AB} &= \vec{AC} + \vec{CB} \\ &= \vec{AC} - \vec{BC} \\ &= \vec{AC} - 3\vec{AC} \\ &= -\vec{AC} \end{aligned}$$

$$\begin{aligned} 2) \quad \vec{AB} &= \vec{AC} + \vec{CB} \\ \vec{AB} &= \vec{AC} + \frac{2}{3}\vec{AB} \end{aligned} \quad \left\{ \begin{array}{l} 3\vec{CB} = 2\vec{AB} \\ \vec{CB} = \frac{2}{3}\vec{AB} \end{array} \right.$$

donc  $\vec{AB} - \frac{2}{3}\vec{AB} = \vec{AC}$

division  $\left( \frac{1}{3} \right) \vec{AB} = \vec{AC}$

$$\vec{AB} = 3\vec{AC}$$

## exercice 151 :

$$1) \vec{AB} + \vec{AC} = 3\vec{BC}$$

$$\vec{AB} = 3\vec{BC} - \vec{AC}$$

$$\vec{AB} = 3(\vec{BA} + \vec{AC}) - \vec{AC}$$

$$\vec{AB} = 3\vec{BA} + 3\vec{AC} - \vec{AC}$$

$$\vec{AB} - 3\vec{BA} = 3\vec{AC} - \vec{AC}$$

$$\vec{AB} + 3\vec{AB} = 2\vec{AC}$$

$$4\vec{AB} = 2\vec{AC}$$

$$\vec{AB} = \frac{2}{4}\vec{AC} = \frac{1}{2}\vec{AC}.$$

$$2) -5\vec{BC} + \vec{CA} = 4\vec{BA}$$

$$-5(\vec{BA} + \vec{AC}) + \vec{CA} = 4\vec{BA}$$

$$-5\vec{BA} - 5\vec{AC} + \vec{CA} = 4\vec{BA}$$

$$-5\vec{AC} + \vec{CA} = 4\vec{BA} + 5\vec{BA}$$

$$-5\vec{AC} - \vec{AC} = 9\vec{BA}$$

$$-6\vec{AC} = -9\vec{AB}$$

$$\text{donc } \vec{AB} = \frac{-6}{-9}\vec{AC} = \frac{2}{3}\vec{AC}$$

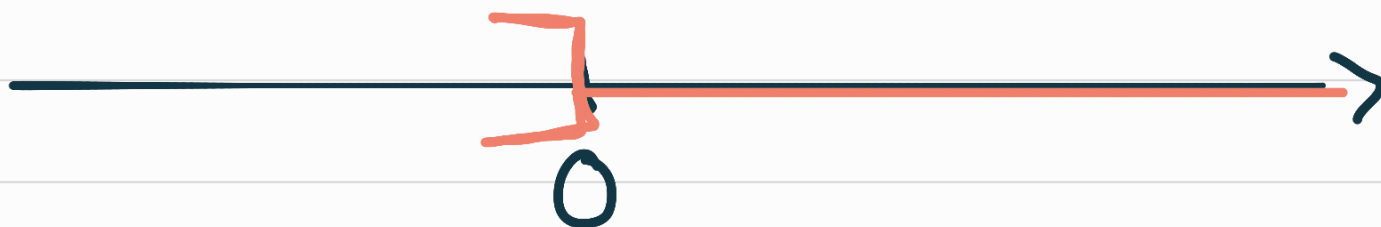
## exercice 68:

1)



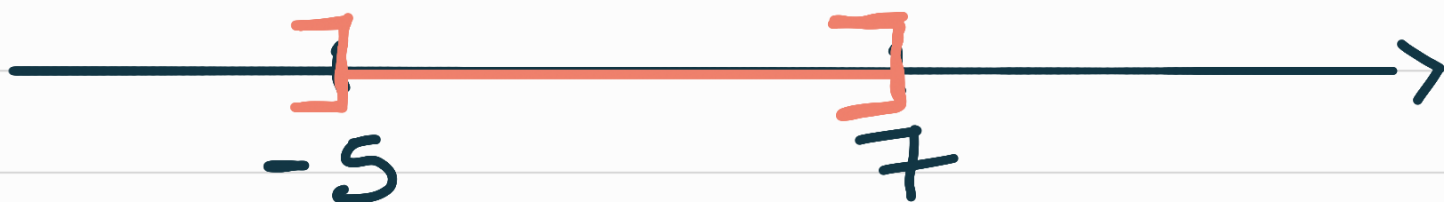
$$x \in [10; +\infty[$$

2)



$$x \in ]0; +\infty[$$

3)

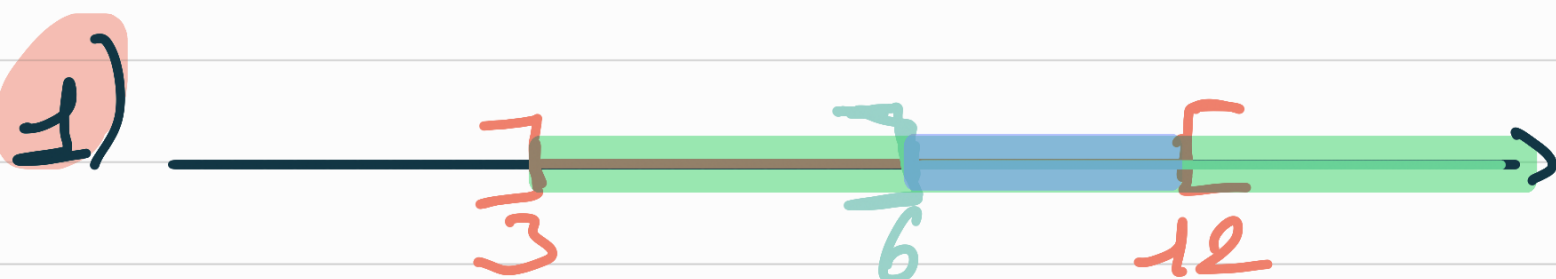


$$x \in [-5; 7].$$



$$x \in ]-\infty; 2[.$$

exercice 70 :



$$I \cap J = ]6; 12[$$

$$I \cup J = ]3; +\infty[$$

2)



$$I \cap J = ]5; 9]$$

$$I \cup J = ]-\infty; +\infty[$$

3)



$$I \cap J = \{9\}$$

$$I \cup J = [-2; +\infty[$$

## exercice 119:

a)  $x < -2$  ou  $3 < x \leq 5$

$$x \in ]-\infty; -2[ \cup ]3; 5]$$

b)  $4 \leq x < -3$  ou  $x \geq 1$

$$x \in [-4; -3[ \cup [1; +\infty[.$$