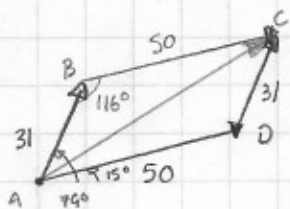


OPERATIONS SUR LES VECTEURS

1. a)



$$\angle BAD = 79^\circ - 15^\circ = 64^\circ$$

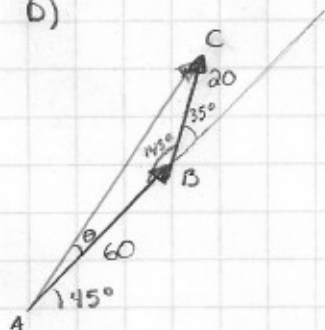
$$\angle ABC = \frac{360 - (2 \cdot 64)}{2} = 116^\circ$$

$$\|\vec{AC}\| = 69,43 \text{ N}$$

$$0^\circ \Rightarrow \frac{69,43}{\sin 116} = \frac{31}{\sin \theta} \Rightarrow \theta = 23,7^\circ$$

$$0^\circ \Rightarrow 23,7 + 15^\circ = 38,7^\circ$$

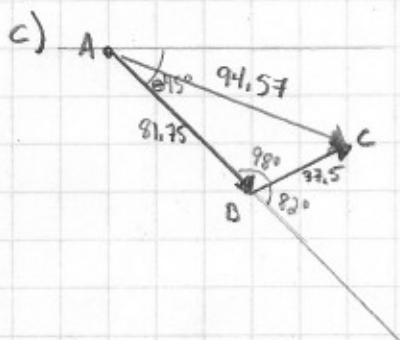
b)



$$\|\vec{AC}\| = 77,24 \text{ km/h}$$

$$0^\circ \Rightarrow \frac{77,24}{\sin 145^\circ} = \frac{20}{\sin \theta} \Rightarrow \theta = 8,5^\circ$$

$$0^\circ \Rightarrow 45^\circ + 8,5^\circ = 53,5^\circ$$

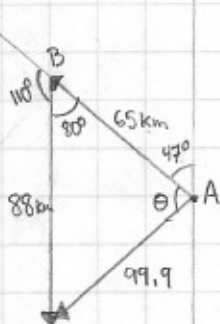


$$\|\vec{AC}\| = 94,57 \text{ km}$$

$$0^\circ \Rightarrow \frac{94,57}{\sin 98} = \frac{37,5}{\sin \theta} \Rightarrow 23,1^\circ$$

$$0^\circ \Rightarrow 315^\circ + 23,1^\circ = 338,1^\circ$$

d)



$$\|\vec{AC}\| = 99,9$$

$$0^\circ \Rightarrow \frac{99,9}{\sin 80^\circ} = \frac{88}{\sin \theta} \Rightarrow \theta = 60,2^\circ$$

$$0^\circ \Rightarrow 90^\circ + 47^\circ + 60,2^\circ = 197,2^\circ$$