

CORRIGÉ

MAT 536 – MINI-TEST LES VECTEURS

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1.

$\vec{a} = 4$ $\vec{b} = 5$ $\|\vec{a} + \vec{b}\| = 8,1677$
 $\|\vec{a} - \vec{b}\| = 3,91$

$\vec{a} \cdot \vec{b} = 4 \cdot 5 \cdot \cos 50^\circ = 12,8558$

a) 8,1677 b) 3,91 c) 12,8558

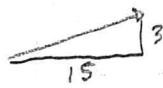
2.

$\frac{3,4641}{\sin 120^\circ} = \frac{2}{\sin \theta} \Rightarrow \theta = 30^\circ$

a) 3,464 b) 30°

3.

$$a) k\vec{v} = (-15, 3) \Rightarrow \sqrt{15^2 + 3^2} = 15,3$$



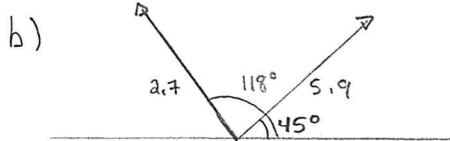
$$\tan \theta = \frac{3}{15} \Rightarrow \theta = 11,3^\circ$$

$$b) \|k\vec{v}\| = 0,6 \cdot 6,34 = 3,804$$

a) 15,3 et 11,3°b) 3,804 et 180°

4.

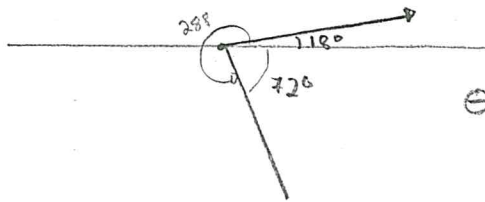
$$a) -6 \cdot 3 + 1 \cdot -11 = -29$$



$$\theta = 73^\circ$$

$$2,7 \cdot 5,9 \cdot \cos 73^\circ = 4,66$$

c)



$$\theta = 90^\circ$$

$$d) \frac{-3}{5} \cdot \frac{1}{6} + \frac{2}{5} \cdot \frac{-4}{15} = \frac{-3}{30} - \frac{8}{75} = \frac{-15}{150} - \frac{16}{150} = \frac{-31}{150}$$

a) -29 NONb) 4,66 NONc) 0, ouid) $\frac{-31}{150} = -0,21$