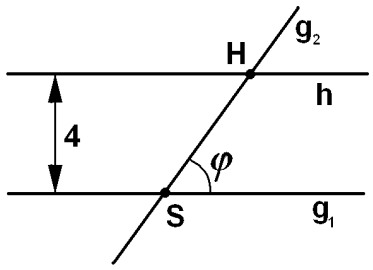
Übungen in AlgGeo ◇ Exercices en AlgGéo ◇ T. F1 ◇ I / 13

Probl. 1 $g_1 : \vec{r} = \begin{pmatrix} -2 \\ 4 \end{pmatrix} + t \begin{pmatrix} 7 \\ 2 \end{pmatrix}$

$g_2 : \vec{r} = \begin{pmatrix} 8 \\ 3 \end{pmatrix} + t \begin{pmatrix} -4 \\ 5 \end{pmatrix}$

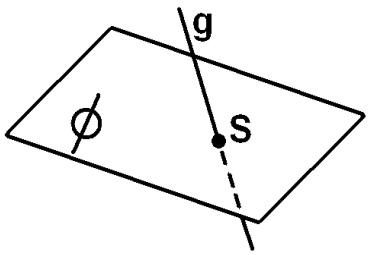
$h = ?$ $S = ?$ $H = ?$ $\varphi = ?$



Probl. 2 (a) $\vec{r} = \begin{pmatrix} -2 \\ 4 \\ 1 \end{pmatrix} + t \begin{pmatrix} 7 \\ 2 \\ -1 \end{pmatrix}$

$\vec{\Phi} = \begin{pmatrix} 1 \\ 0 \\ -2 \end{pmatrix} + \lambda \begin{pmatrix} 4 \\ 1 \\ 4 \end{pmatrix} + \mu \begin{pmatrix} -3 \\ -2 \\ 1 \end{pmatrix}$

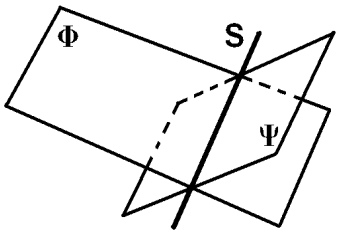
$S = ?$



(b) $\Psi : \vec{r} = \begin{pmatrix} 0 \\ 1 \\ 1 \end{pmatrix} + \lambda \begin{pmatrix} -1 \\ 2 \\ 3 \end{pmatrix} + \mu \begin{pmatrix} 1 \\ -1 \\ 1 \end{pmatrix}$

$H_1 = \{(x, y, 0)\},\ H_2 = \{(0, y, z)\},\ H_3 = \{(x, 0, z)\}$

$s \cap H_1 = ?$ $s \cap H_2 = ?$ $s \cap H_3 = ?$

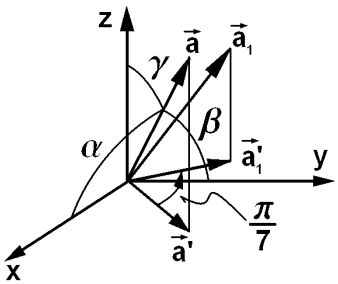


Probl. 3 $\vec{a} = \begin{pmatrix} 1 \\ 2 \\ 3 \end{pmatrix},\ \vec{a}\,' = \begin{pmatrix} 1 \\ 2 \\ 0 \end{pmatrix}$

$\vec{a}_1 = ?$ $\vec{a}_1\,' = ?$

$\alpha = ?$ $\beta = ?$ $\gamma = ?$

Rückseite! • *Verso!*



Probl. 4 $\Psi:\ \vec{r} = \begin{pmatrix} 0 \\ 1 \\ 1 \end{pmatrix} + \lambda \begin{pmatrix} -1 \\ 2 \\ 3 \end{pmatrix} + \mu \begin{pmatrix} 1 \\ -1 \\ 1 \end{pmatrix}$

$P_0 = P_0(15, 20, 18)$

$d = |\overline{HP_0}| = ?$ $\qquad H = ?$