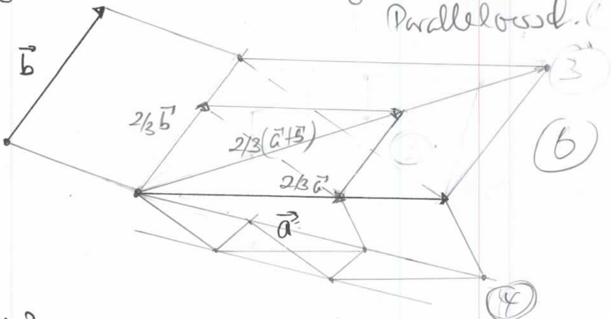
Name Matr.Nr

Fig.1

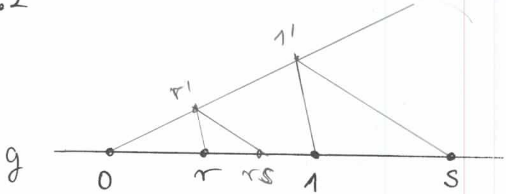
Inzidenzgeometrie, (1)

Parallelogramm. (1)



(6)

Fig.2

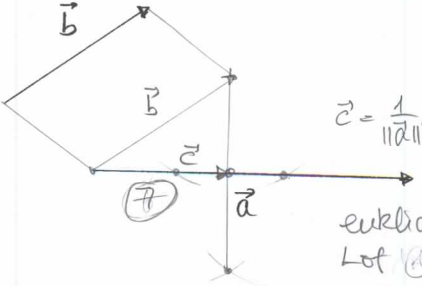


(10)

Inzidenzgeom. (1)

Parallelversch. (1)

Fig.7



$\vec{c} = \frac{1}{\|\vec{a}\|^2}\langle \vec{a} \mid \vec{b} \rangle \vec{a}$ (3)

euklidische Geometrie (1)

Lot (1)

3) $\vec{c} = -3\vec{b}_1 + \vec{b}_2$

$= -3(\vec{a}_1 - \vec{a}_2) + 2\vec{a}_1 + \vec{a}_2$

$= -a_1 + 4a_2$

5 $\vec{c}^{\alpha} = \begin{pmatrix} -1 \\ 4 \end{pmatrix}$

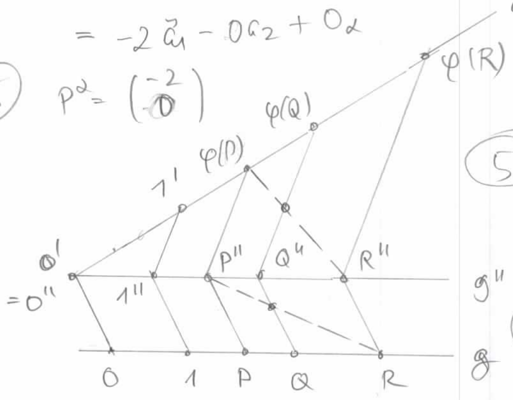
$P = \vec{x} + O_\beta \qquad \vec{x} = 2b_1 - 2b_2$

$P = \vec{a}_1 - \vec{a}_2 - 2(2\vec{a}_1 + \vec{a}_2) + \vec{a}_1 + 3\vec{a}_2 + O_\alpha$

$= -2\vec{a}_1 - 0a_2 + O_\alpha$

5 $P^{\alpha} = \begin{pmatrix} -2 \\ 0 \end{pmatrix}$

4)

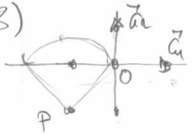


5

5

Begründung: Pasch mit Parallelen 3

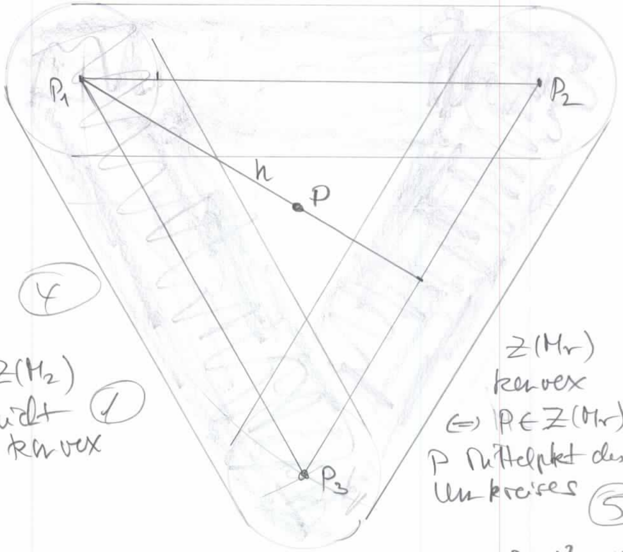
8)



$\begin{pmatrix} 1 & 0 & 0 \\ -2 & 0 & -1 \\ 0 & 1 & 0 \end{pmatrix}$

10

5)



4

$Z(M_2)$
nicht konvex 1

$Z(M_r)$
konvex
$\Leftrightarrow P \in Z(M_r)$
P Mittelpunkt des Umkreises 5

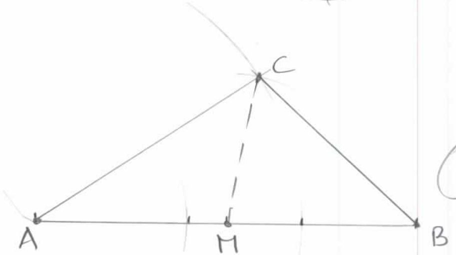
$\Leftrightarrow r \geq \frac{1}{3} h$

$h^2 + 6^2 = 12^2$

$h = \sqrt{108}$

$r = 2\sqrt{3}$ 4

6)



4

$AMC \cong A'M'C'$ nach SSS 6

$\Rightarrow \measuredangle CAM = \measuredangle C'A'M'$

$\Rightarrow ABC \cong A'B'C'$ nach SWS