

Probl. 1 $z_1 = 2 + 4i$, $z_2 = -4 - 6i$

(a) $z_1 \cdot z + z_2^{-1} = \frac{\bar{z}_1}{\operatorname{Re}(z_1)} \quad z = ?$

(b) Skizze von • *Esquisse de* $z_1, z_2, z_2^{-1}, \bar{z}_1, \operatorname{Re}(z_1), z$?

(c) $w^6 = z_2 \quad \leadsto$

Skizze der Lösungen $(w_0, w_1, \dots, w_5)$? • *Esquisse des solutions* $(w_0, w_1, \dots, w_5)$?

Probl. 2 Gegeben: • *Donné:* $\triangle ABC$, $A(4, 3), B(5, 7), C(1, 6)$.

Drehung, Zentrum O , $\varphi = +35^\circ$ • *Rotation, centre* O , $\varphi = +35^\circ \leadsto \triangle ABC \mapsto \triangle A'B'C'$

(a) Koordinaten von • *Coordonnées de* $\triangle A'B'C'$?

(b) Abstand von $\overline{AB}$ zu O ? • *Distance de* $\overline{AB}$ à O ?

(c) $\sphericalangle \alpha, \beta, \gamma = ?$ (in • *dans* $\triangle ABC$)

(d) Flächeninhalt von $\triangle ABC = ?$ • *Surface de* $\triangle ABC = ?$

Probl. 3 $\Phi : -2x + 4y - 3z + 2 = 0$

$\Psi : -x - 2y + 4z + -1 = 0$

$s = \Phi \cap \Psi$ Gerade • *droite*

$P = P(4, 4, 4)$,

$(x, y) = xy$ -Ebene • *plan* xy

(a) $P_1 = s \cap (x, y) = ?$

(b) Abstand von Φ zu $P = ?$ • *Distance de* Φ à $P = ?$

(c) Abstand von s zu $P = ?$ • *Distance de* s à $P = ?$