2) $\overrightarrow{AB} = (-8; -4) \sim (2; 1)$

$\sigma_{AB} \dots 2x + y + c_1 = 0$

$A + B = [0; -2] \Rightarrow \sigma_{AB}: 2x + y + 2 = 0$

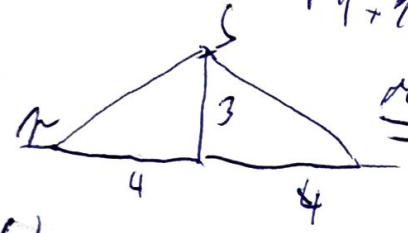
$\overrightarrow{AC} = (7; -7)$ $\sigma_{AC} \dots x - 7y + c_2 = 0$

$A + C = [4{,}5; -3{,}5] \Rightarrow \sigma_{AC}: x - 7y - 29 = 0$

$\begin{pmatrix} 2 & 1 & | & -2 \\ 1 & -7 & | & 29 \end{pmatrix} \sim \begin{pmatrix} 1 & -7 & | & 29 \\ 0 & 15 & | & -60 \end{pmatrix} \sim \begin{pmatrix} 1 & 1 & | & 1 \\ 1 & & | & -4 \end{pmatrix}$

$x = 1 ; y = -4 \Rightarrow |S1| = 5 = r$

3) $\rho(S, p) = \frac{|1 - 2 \cdot 3 - 3 \cdot 4|}{\sqrt{9 + 16}} = \frac{15}{5} = 3$



$r = \sqrt{3^2 + 4^2} = 5$

4) $x_0 = 2 ; y_0 = r$

$(x_0 + 4)^2 + (y_0 - 2)^2 = r^2$

$6^2 + (r - 2)^2 = r^2$

$36 + r^2 - 4r + 4 = r^2$

$40 = 4r \Rightarrow r = 10$

$k: (x - 2)^2 (y - 10)^2 = 100$

5) $S \in$ osi $\Rightarrow x, y$

a) $S \in k: x_0 = y_0$

$6x_0 = 12 \Rightarrow x_0 = 2$

$k_1: (x - 2)^2 + (y - 2)^2 = 4$

b) $S \in k': x_0 = -y_0$

$4x_0 = 12 \Rightarrow x_0 = 3$

$k_2: (x - 3)^2 + (y + 3)^2 = 9$

145/5.6 :)

$(-1 - 2)^2 + (-5 + 1) =$

$= 9 + 16 = 25$

QED

$S [2, -1]$

$\overrightarrow{MS} = (3; 4) = \overrightarrow{SM'}$

$M' = (5; 3)$

$(5 - 2)^2 + (3 + 1)^2 =$

$= 9 + 16 = 25$

QED