

$$K: y = ax + b$$

$$K \parallel L: y = ax + b_L$$

$$K: y = a(x - p) + q$$

$$K \perp L: y = -\frac{1}{a}x + b_L$$

$$K: Ax + By + C = 0$$

$$K \parallel L: Ax + By + C_L = 0$$

$$K \perp \vec{w} = [A, B]$$

$$K \perp L: -Bx + Ay + C_L = 0$$

$$K \perp L \Rightarrow A_K \cdot A_L + B_K \cdot B_L = 0$$

sty 15-07:33

$$K: 3x + 4y + 5 = 0$$

$$-4x + 3y + C = 0$$

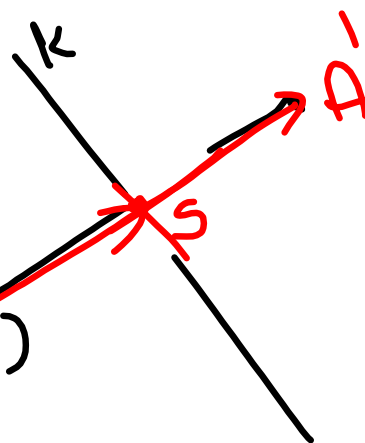
$$L: L \perp K \wedge A \in L$$

$$S: L \cap K$$

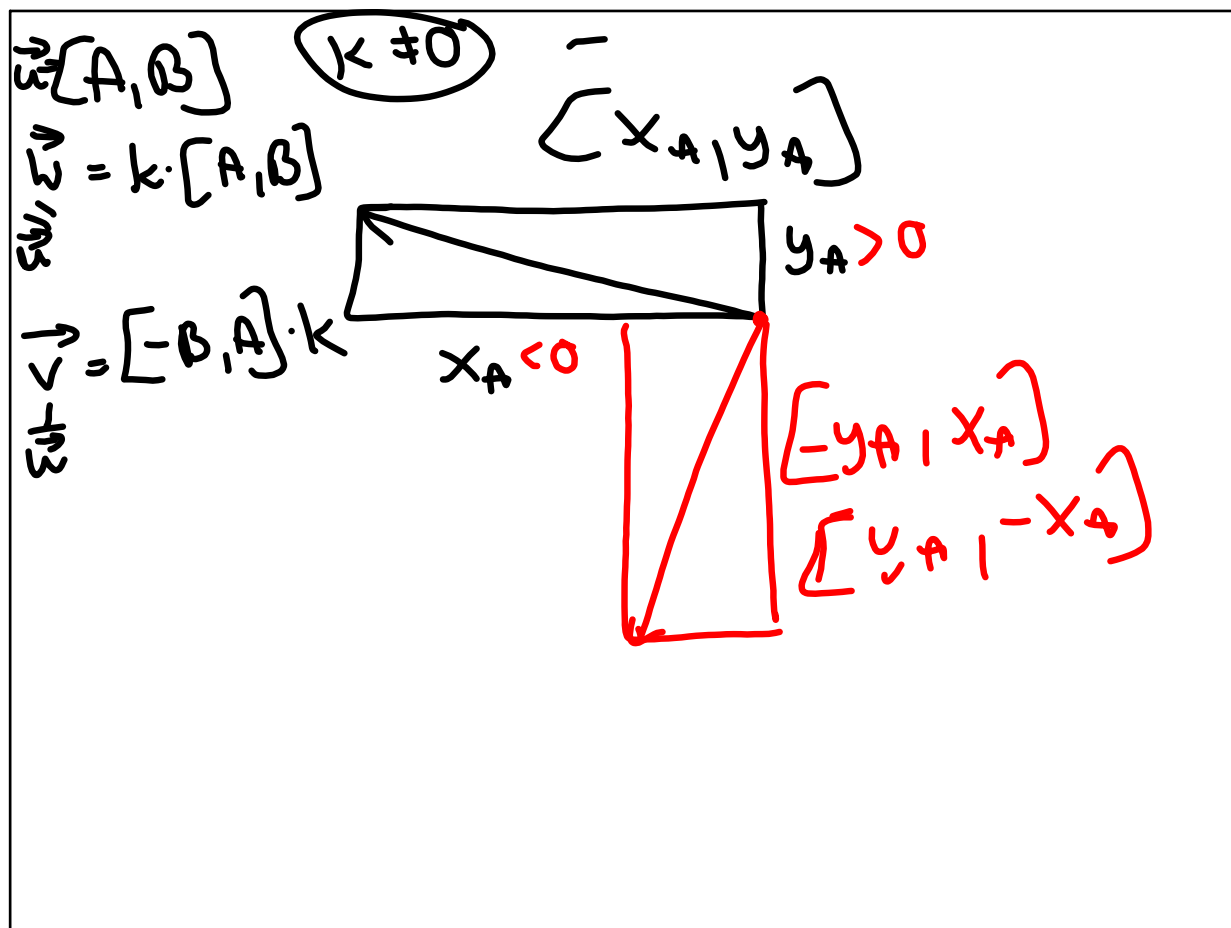
$$\vec{SA} = \vec{AS} \Rightarrow A' =$$

$$S = \frac{A + A'}{2}$$

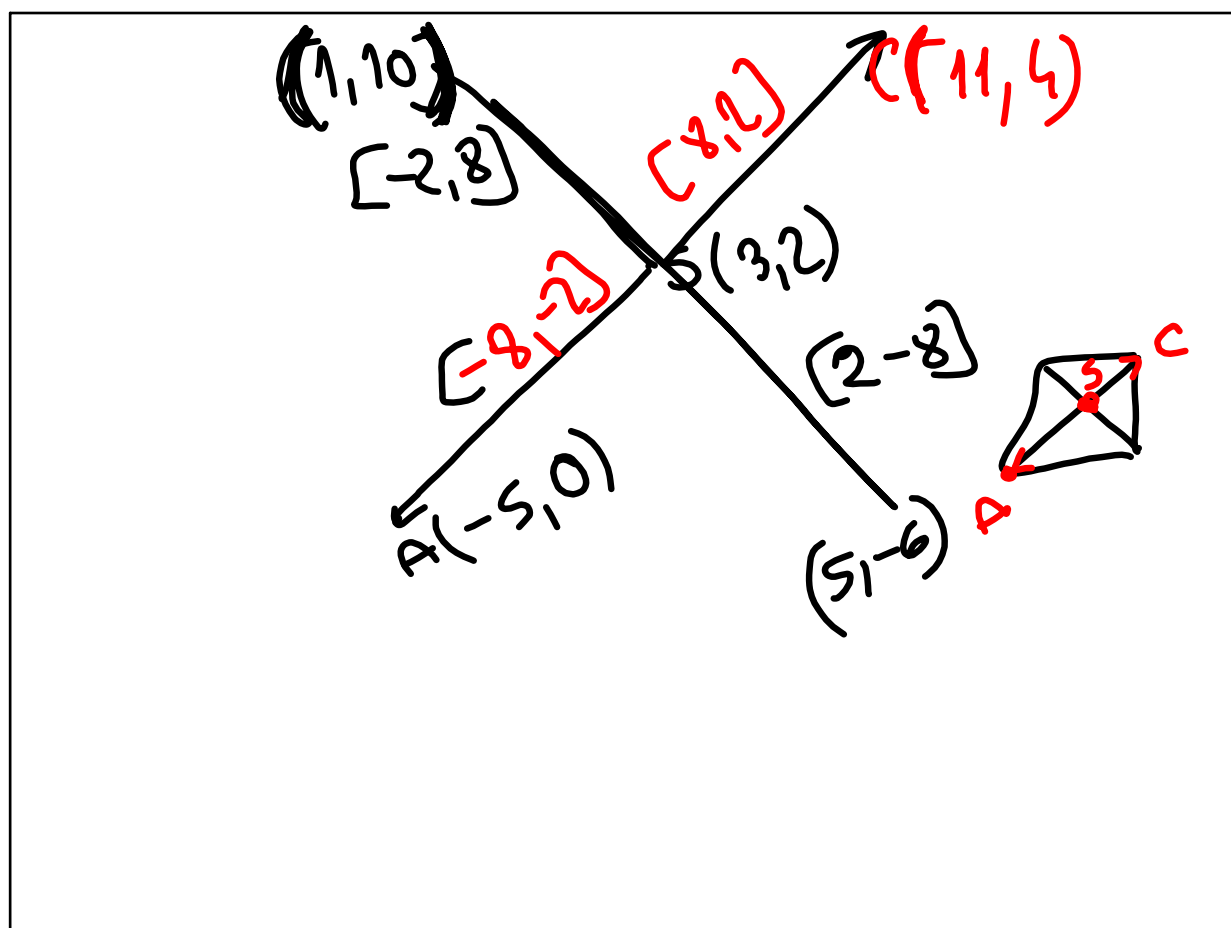
$$A' = 2 \cdot S - A$$



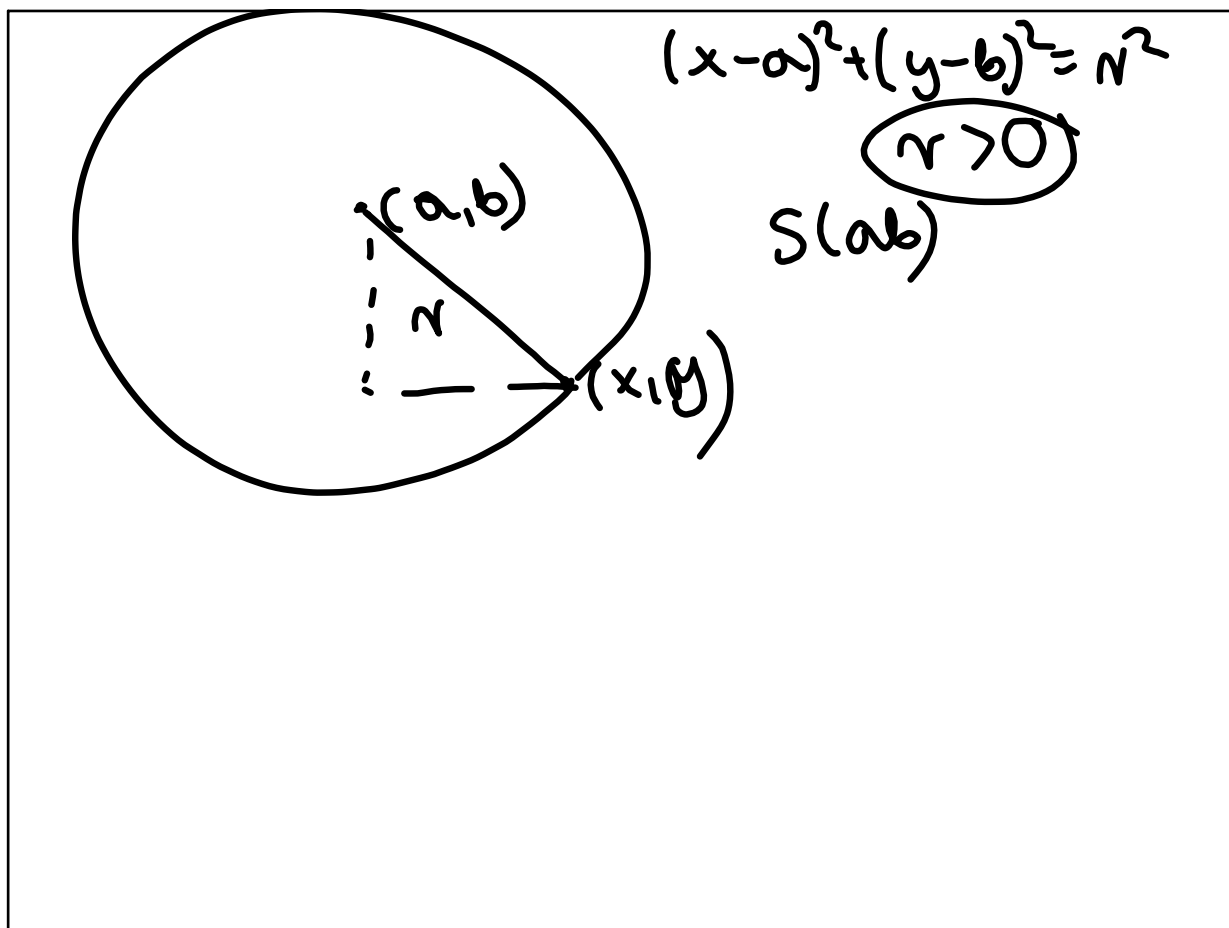
sty 15-07:39



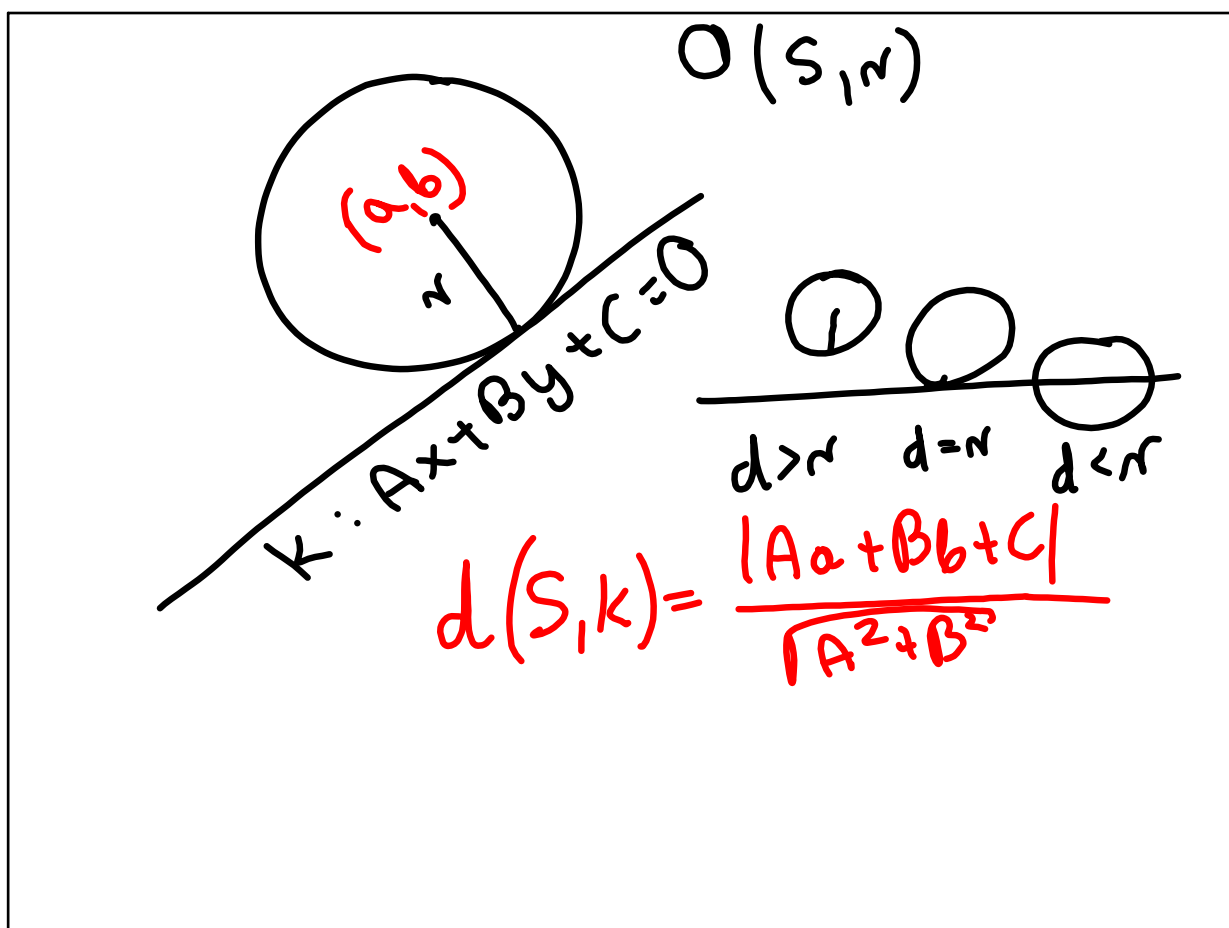
sty 15-07:44



sty 15-07:47

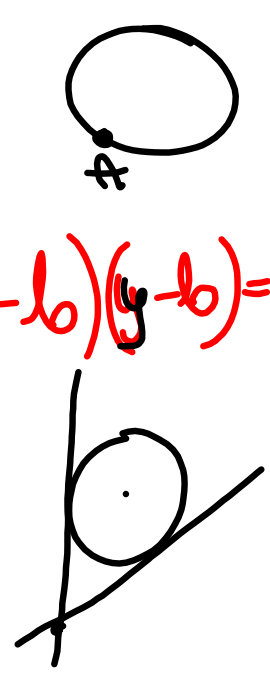


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sty 15-07:53

$A \in O(S, N)$
 $(x-a)^2 + (y-b)^2 = N^2$
 $k: (x_A - a)(x - a) + (y_A - b)(y - b) = N^2$



sty 15-07:56

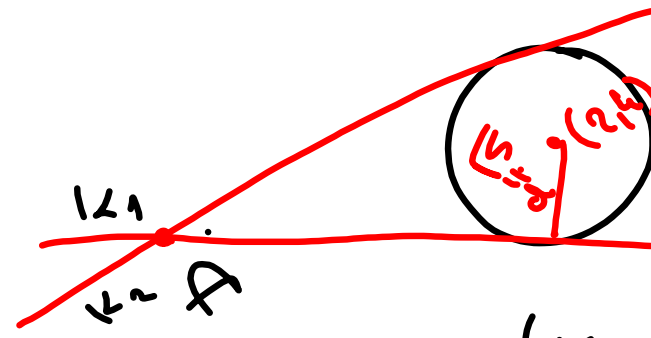
$A(-1, 3)$ $(x-2)^2 + (y-4)^2 = 5$

$A = a$ $C = a + 3$
 $B = -1$ $x_0 = 2$

$ax - y + 3 + a = 0$
 $Ax + By + C = 0$

$k: y = a(x - p) + q$
 $k: y = a(x + 1) + 3$

$d = r = \sqrt{5}$



sty 15-07:58

$$\sqrt{5} = \frac{|2a - 4 + a + 3|}{2}$$

$$\sqrt[2]{3a-1} = \sqrt[2]{5(a^2+1)} \quad | ()^2$$

$$9a^2 - 6a + 1 = 5a^2 + 5$$

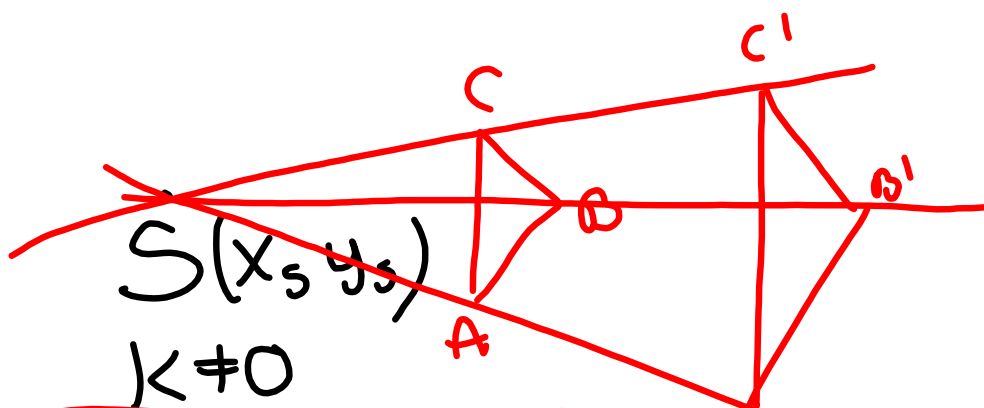
$$4a^2 - 6a - 4 = 0$$

$$2a^2 - 3a - 2 = 0$$

$$1/1^2$$

$$2(a-2)/(a+\frac{1}{2}) = 0$$

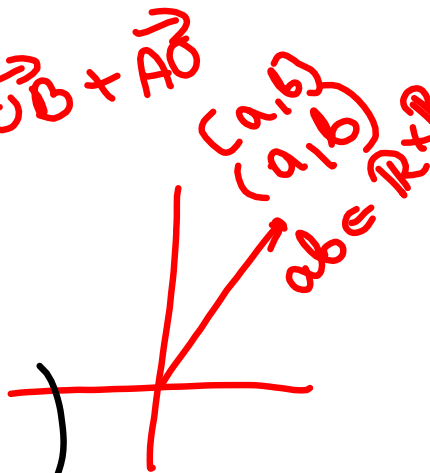
sty 15-08:02



$$J_S^k(A) = A' \Leftrightarrow SA' = k \cdot SA$$

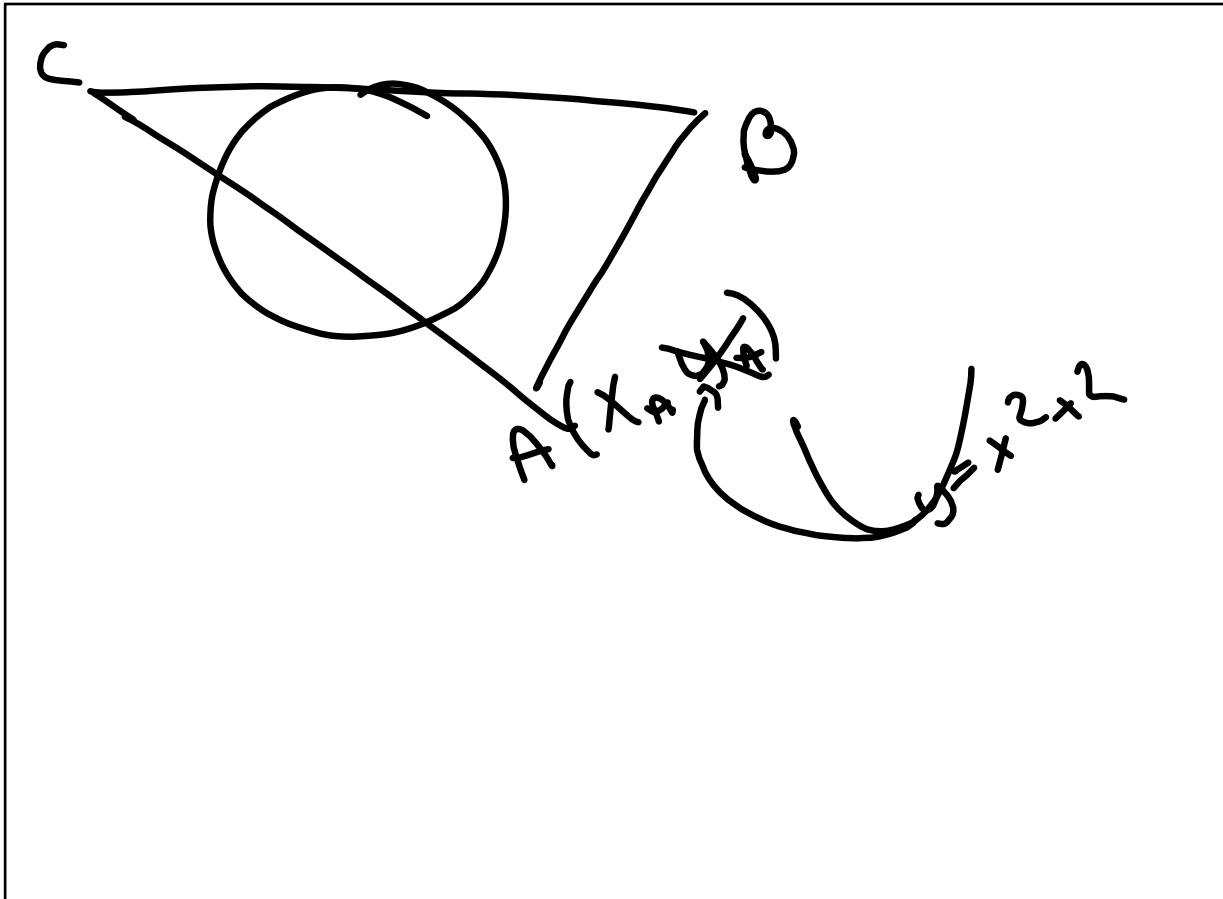
sty 15-08:10

$\vec{AB} = B - A =$
 $\vec{OB} = B$
 $\vec{AB} = \vec{OB} - \vec{OA} = \vec{OB} + \vec{AO}$
 $\vec{AO} + \vec{OB} = \vec{AB}$
 $(a, b) \cdot (c, d) = (\quad , \quad)$



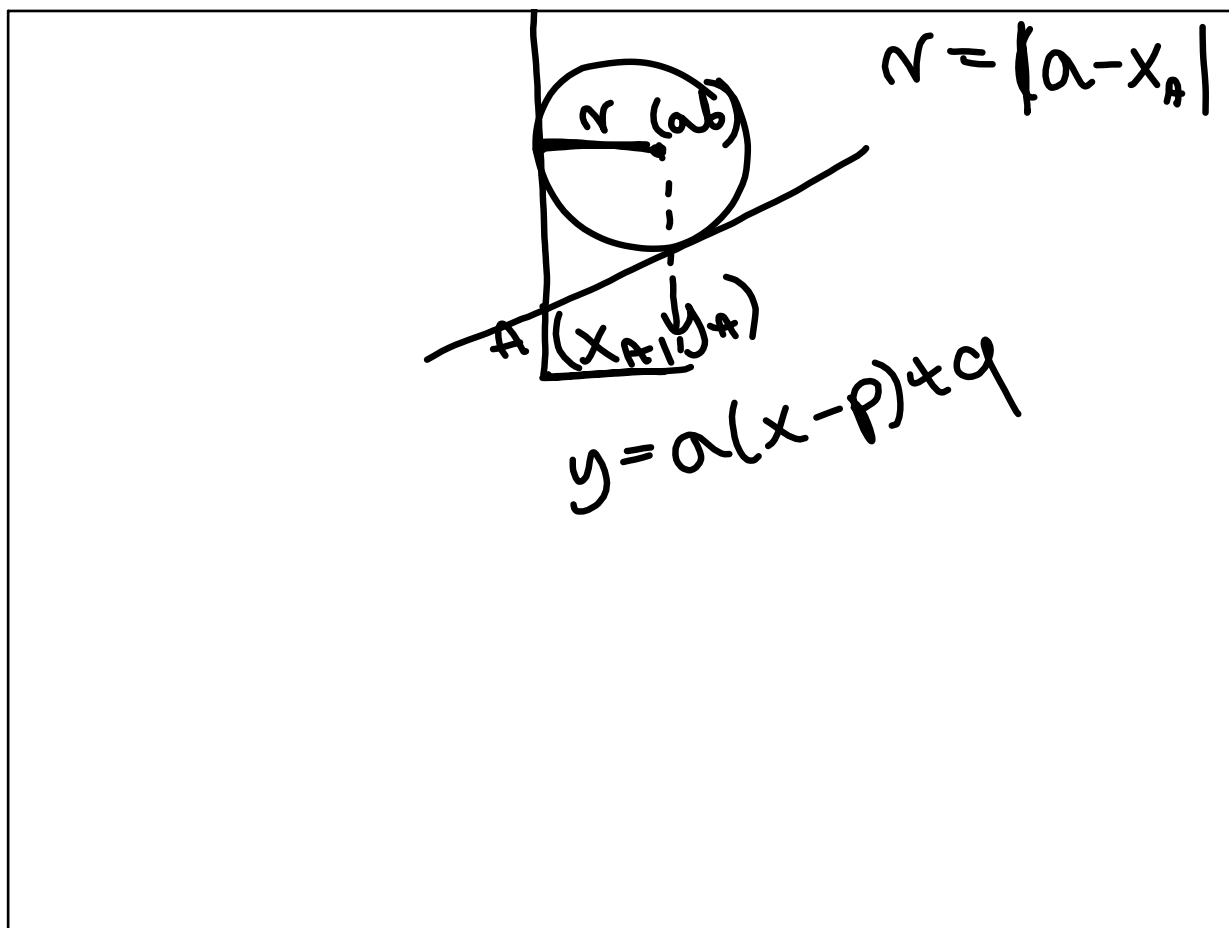
(a, b)
 (a, b)
 $ab \in \mathbb{R} \times \mathbb{R}$

sty 15-08:13

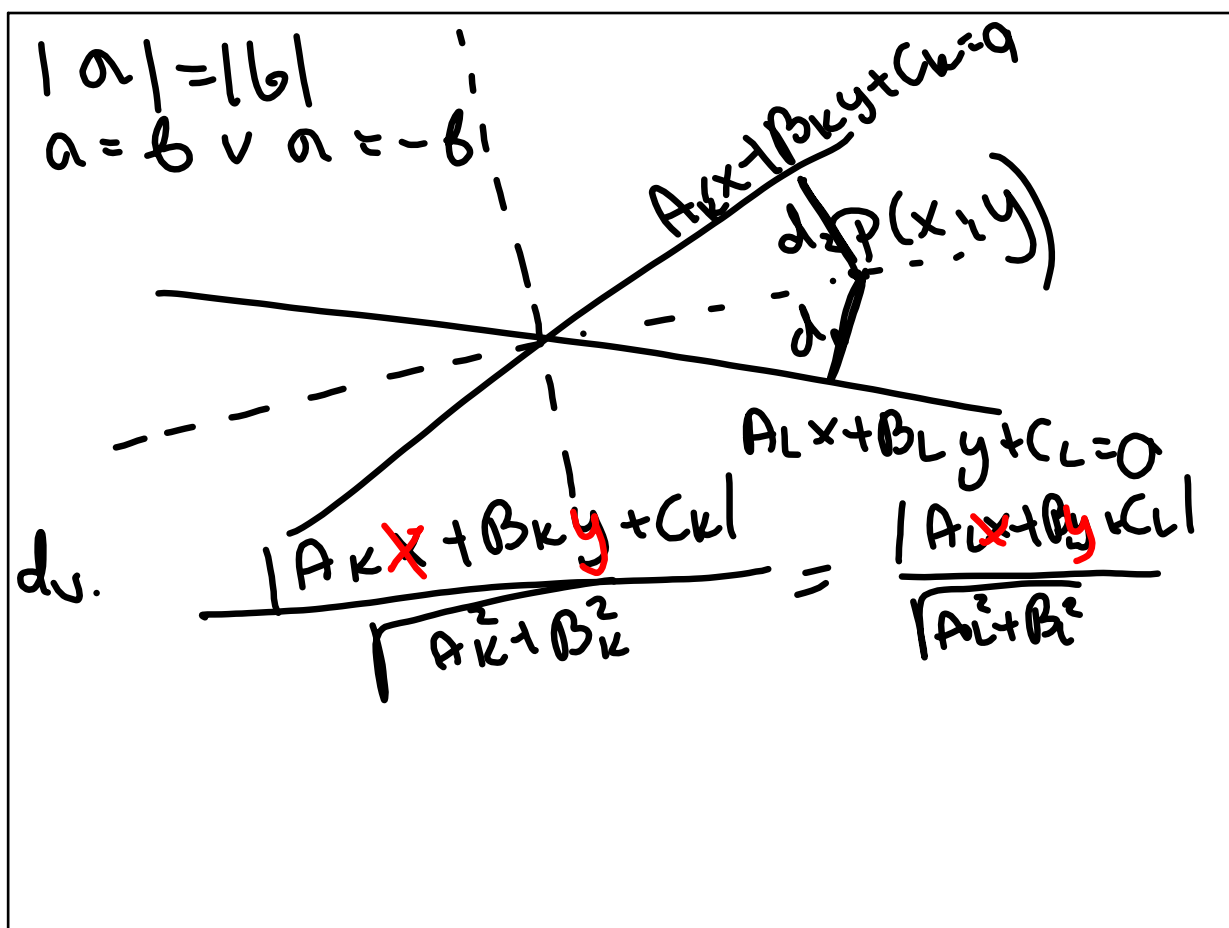


$A(x, y)$
 $y = x^2 + 2x^2$

sty 15-08:16



sty 15-08:02



sty 15-08:18

$S = \frac{A+B}{2}$
 $\vec{AB} = [x_a, y_a]$
 $x_a x + y_a y + C = 0$
 $C(3,5)$
 $3x + 5y + C = 0$

$P(x, y)$
 $A(x_a, y_a)$
 $B(x_b, y_b)$
 $|AP| = |BP|$
 $(x_a - x)^2 + (y_a - y)^2 = (x_b - x)^2 + (y_b - y)^2$

$\sqrt{\cos} = \sqrt{\sin}$
 $k: (x_a - x)^2 + (y_a - y)^2 = (x_b - x)^2 + (y_b - y)^2$

sty 15-08:23

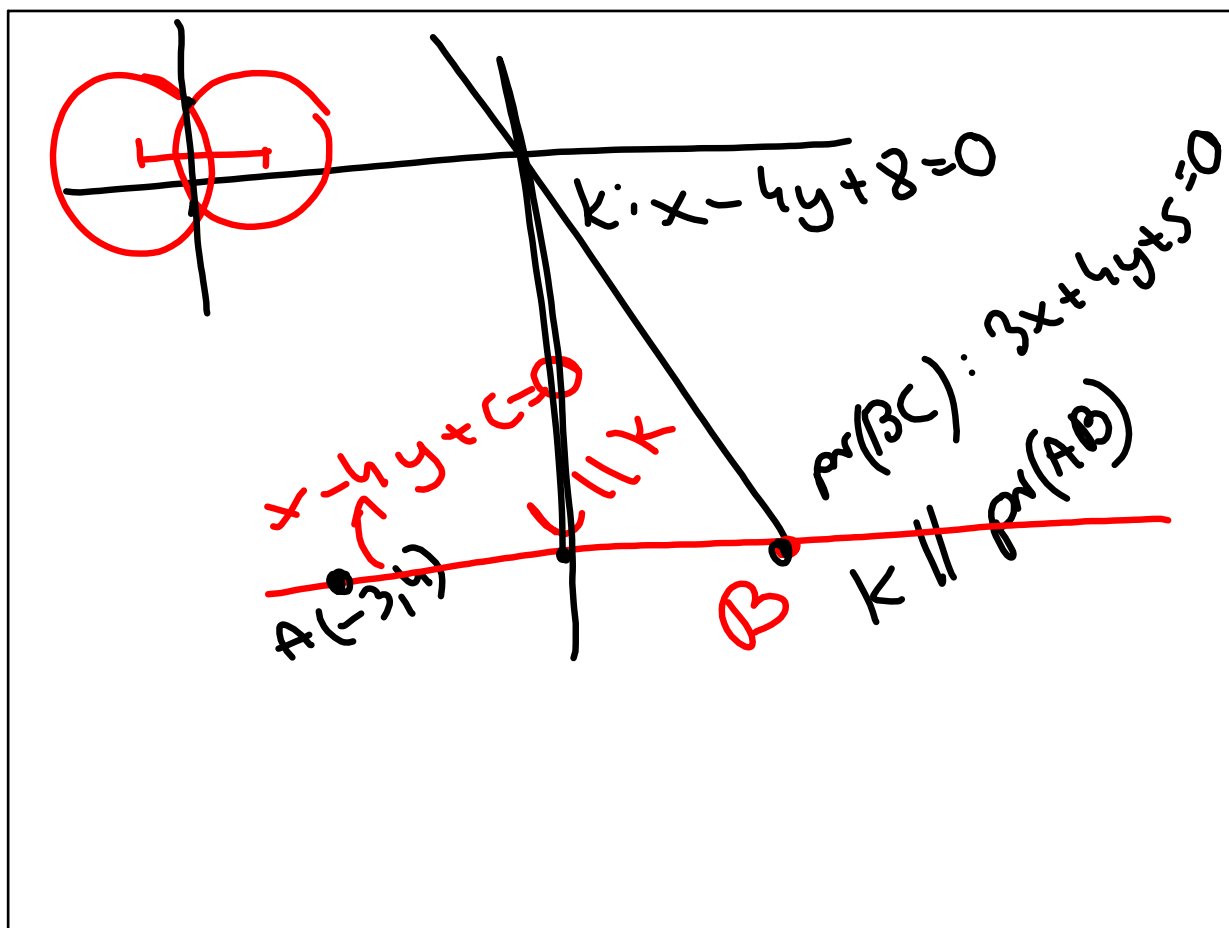
$W. P(KA) \quad \ddot{\smile} ?$

$W + \frac{1}{2}B - 1 = P_{wiel. \text{ o v. op. kr.}}$

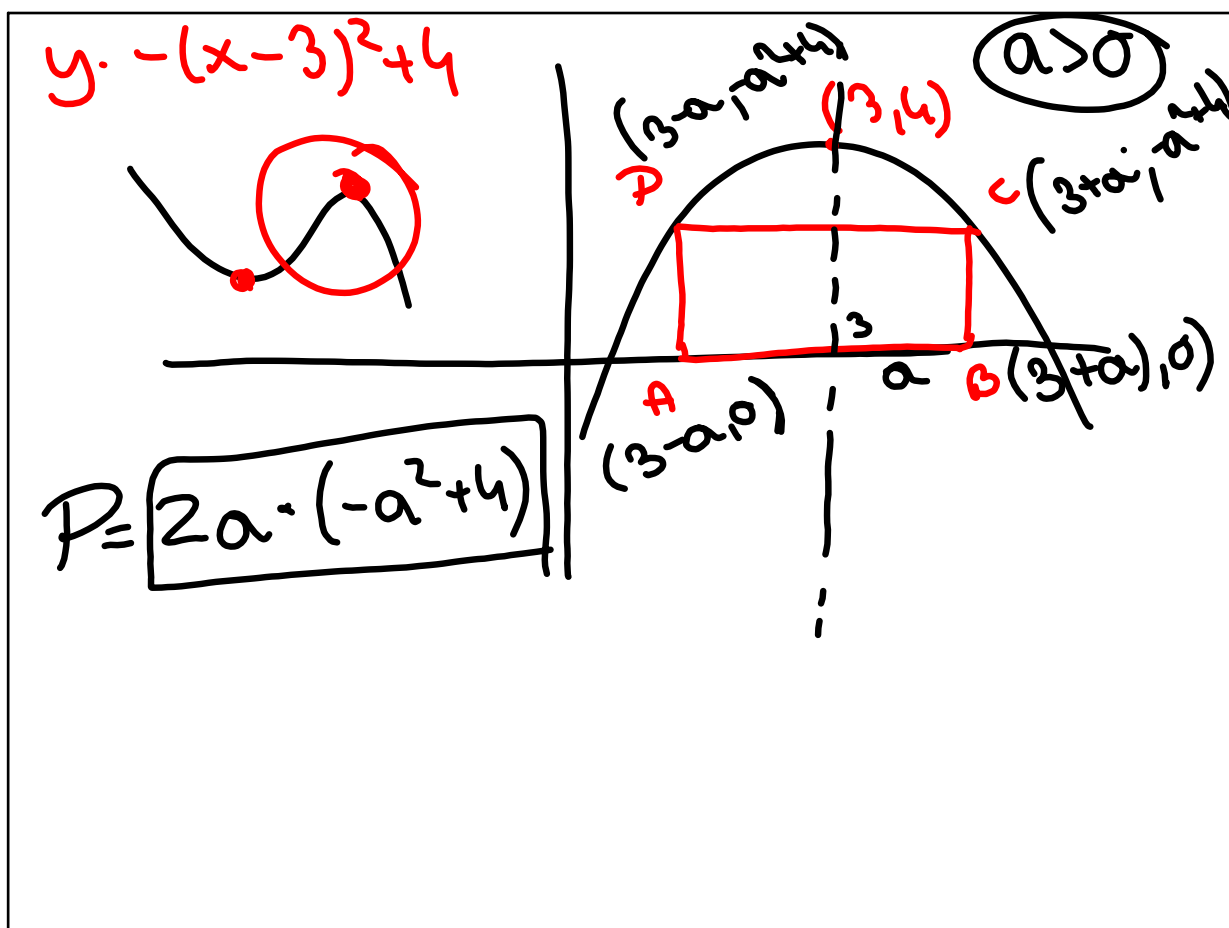
$S = \frac{A+B+C}{3}$

$P_{\text{OADC}} = \frac{1}{2} \left| \begin{matrix} \vec{AB} \\ \vec{AC} \end{matrix} \right|$

sty 15-08:28



sty 15-08:35



sty 15-08:40