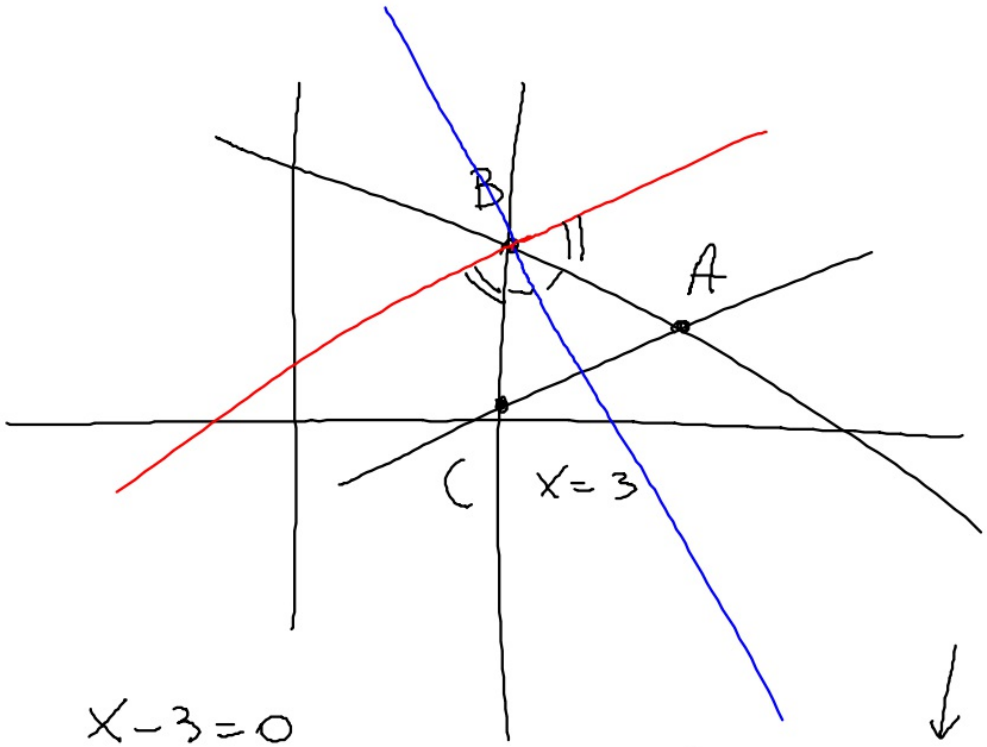


$x-3=0$

$x+2y=15$

$(\sqrt{5}+1)x+2y-3\sqrt{5}-15=0$

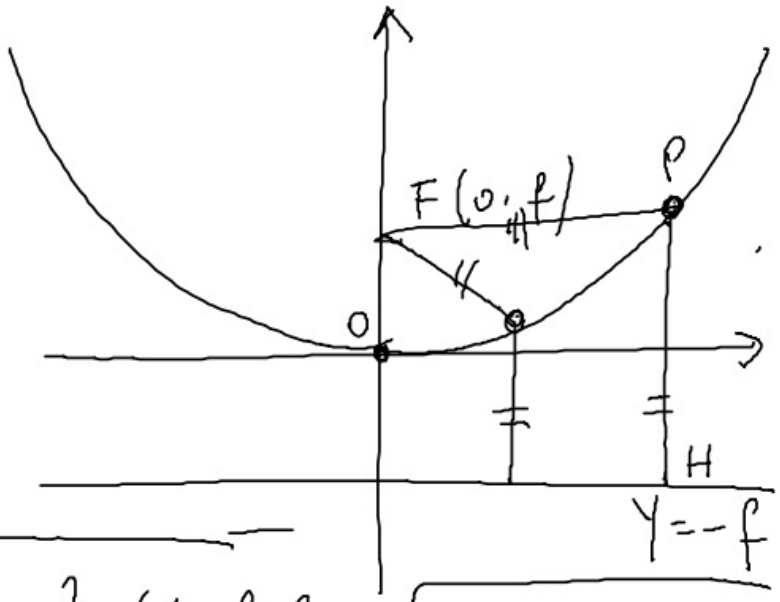
$(\sqrt{5}-1)x-2y-3\sqrt{5}+15=0$

$m_1=-\frac{a}{b}=\frac{-(\sqrt{5}+1)}{2}<0$

$m_2=\frac{+(\sqrt{5}-1)}{+2}>0$

$F(0;f)$

$y=-f$



$P(x;y)$

$$\overline{PF} = \sqrt{(x-0)^2+(y-f)^2} = \sqrt{x^2+y^2+f^2-2fy}$$

$y+f=0$ $\qquad \overline{PH} = \dfrac{|ax_0+by_0+c|}{\sqrt{a^2+b^2}} = \dfrac{|1\cdot y+f|}{\sqrt{1^2}} =$

$$= |y+f|$$

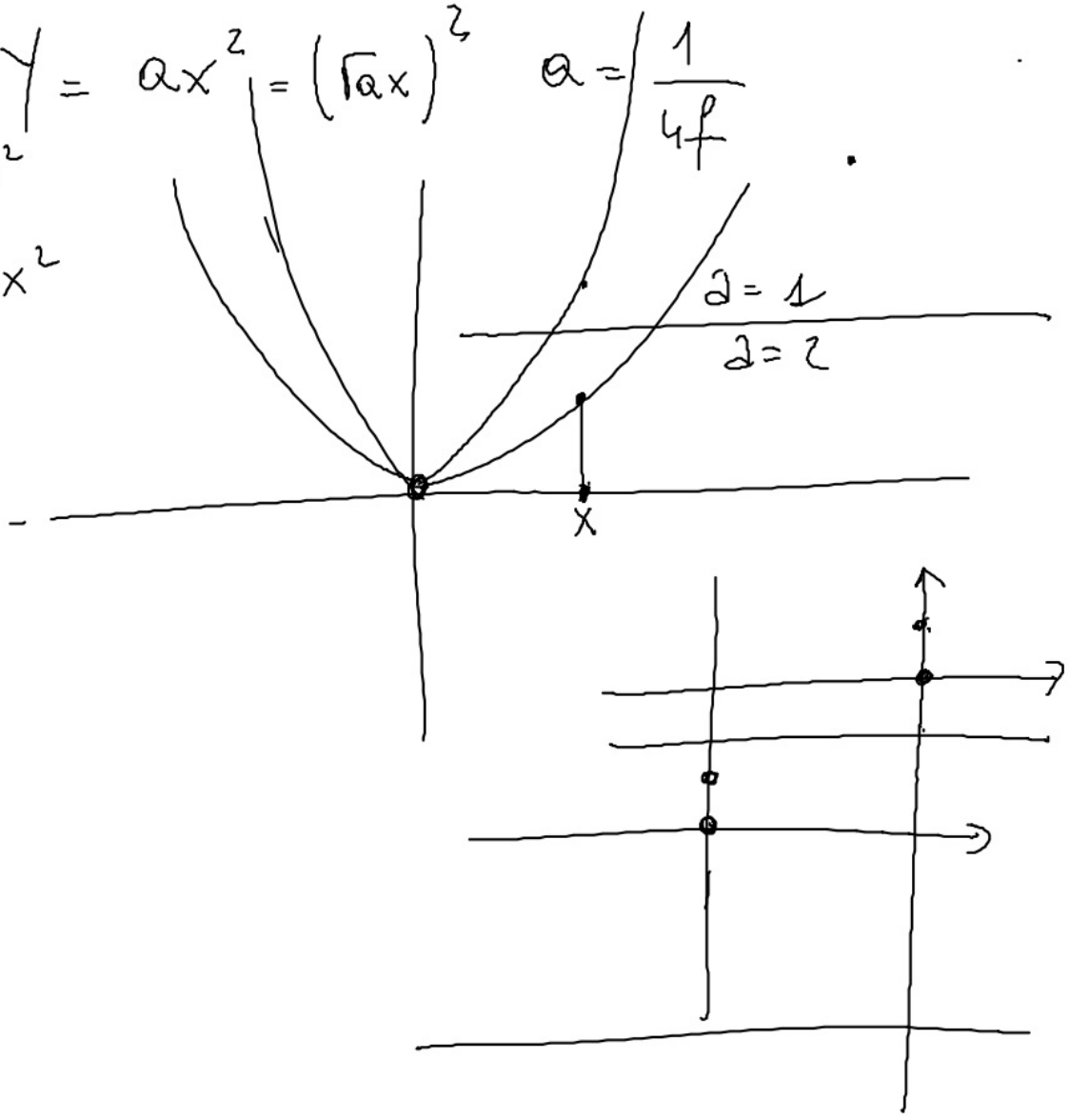
$\overline{PF}=\overline{PH}$

$$\sqrt{x^2+y^2+f^2-2fy} = |y+f|$$

$$x^2+y^2+f^2-2fy = y^2+f^2+2fy$$

$$+4fy = +x^2 \qquad y = \frac{x^2}{4f} = \left(\frac{1}{4f}\right)\cdot x^2$$

$y = ax^2 = (\sqrt{a}x)^2 \quad a = \frac{1}{4f}$

$y = 2x^2$

$y = -2x^2$