

Conics

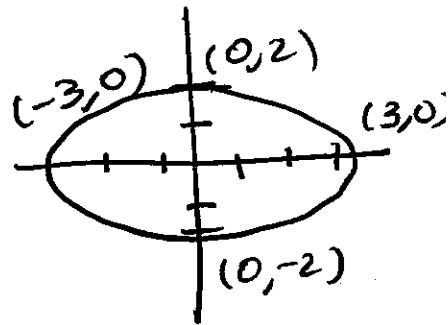
Sketch the graph of the ellipse.
Label the intercepts.

(31) $\frac{x^2}{9} + \frac{y^2}{4} = 1$

intercepts

$$\begin{aligned}x &= 0 \\ \frac{y^2}{4} &= 1 \\ y^2 &= 4 \\ y &= \pm 2 \\ &(0, \pm 2)\end{aligned}$$

$$\begin{aligned}y &= 0 \\ \frac{x^2}{9} &= 1 \\ x^2 &= 9 \\ x &= \pm 3 \\ &(\pm 3, 0)\end{aligned}$$

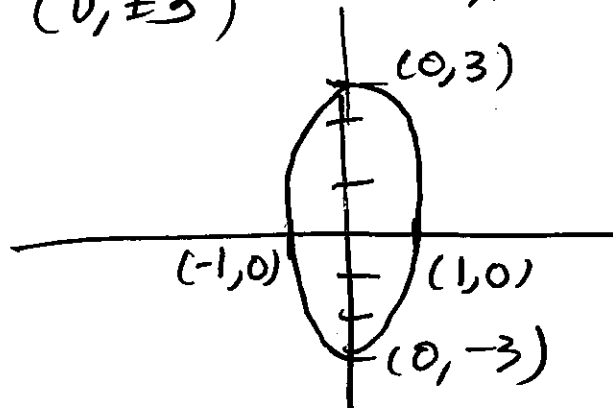


(32) $9x^2 + y^2 = 9$

intercepts

$$\begin{aligned}x &= 0 \\ y^2 &= 9 \\ y &= \pm 3 \\ &(0, \pm 3)\end{aligned}$$

$$\begin{aligned}y &= 0 \\ 9x^2 &= 9 \\ x^2 &= 1 \\ x &= \pm 1 \quad (\pm 1, 0)\end{aligned}$$



Sketch the graph of the hyperbola.
Label the intercepts. Sketch the asymptotes.

33) $4x^2 - y^2 = 4$

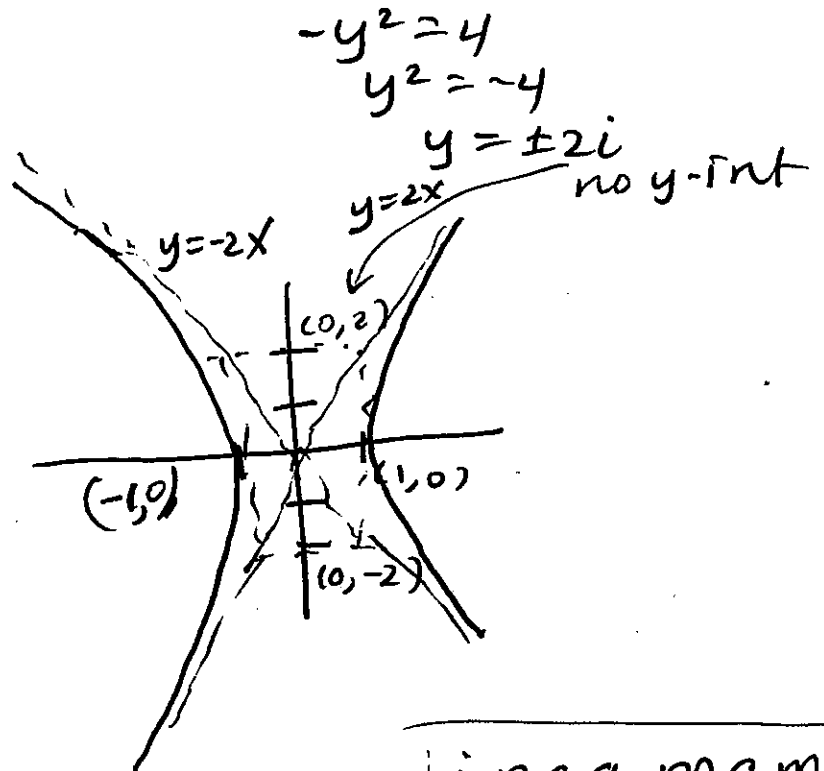
$y = 0$

$4x^2 = 4$

$x^2 = 1$

$x = \pm 1$

$(\pm 1, 0)$



34) $\frac{y^2}{9} - x^2 = 1$

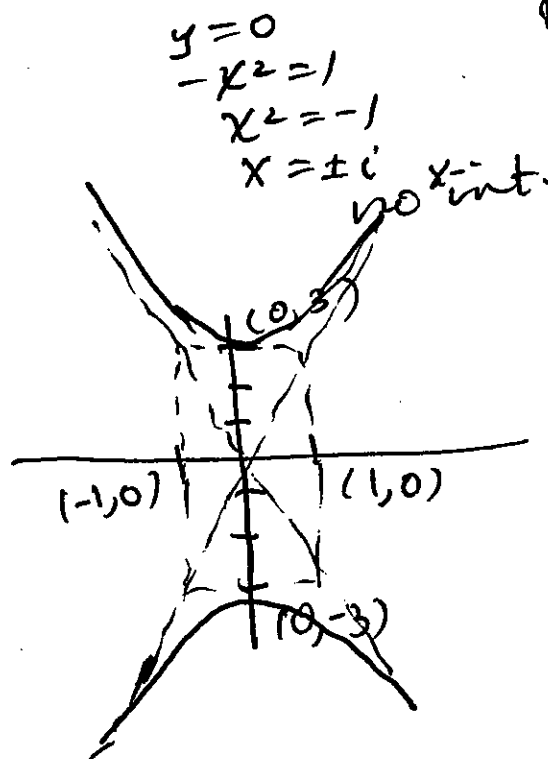
$x = 0$

$\frac{y^2}{9} = 1$

$y^2 = 9$

$y = \pm 3$

$(0, \pm 3)$



Inca mama
Peruvian
cuisine.