# Conic Menu

The Conic Menu will graph conics in an (H, K) form, such as $x = A(y - K)^2 + H$, a standard form such as $x = Ay^2 + By + C$, or the general form, $Ax^2 + Bxy + Cy^2 + Dx + Ey + F = 0$. The general form includes rotated conics. The easiest way to input the equation for the relation is to insert a form, and edit the coefficients.

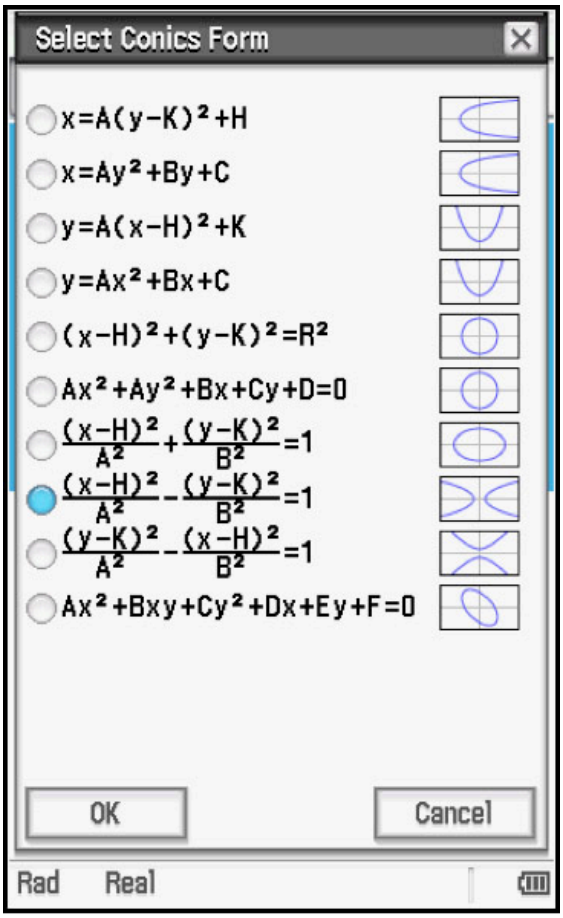
The G-Solve commands will display important features related to conics, such as a center, vertices, foci, and asymptotes.

1. Graph . $\frac{(x - 2)^2}{6^2} - \frac{(y + 1)^2}{8^2} = 1$

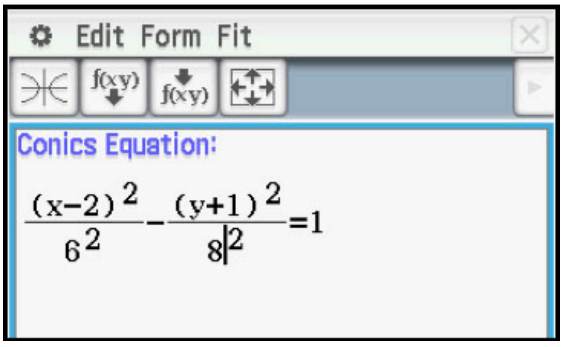
Tap Menu, then the Conics icon.

Tap f(xy).

Select the form for this hyperbola, and tap **OK**.



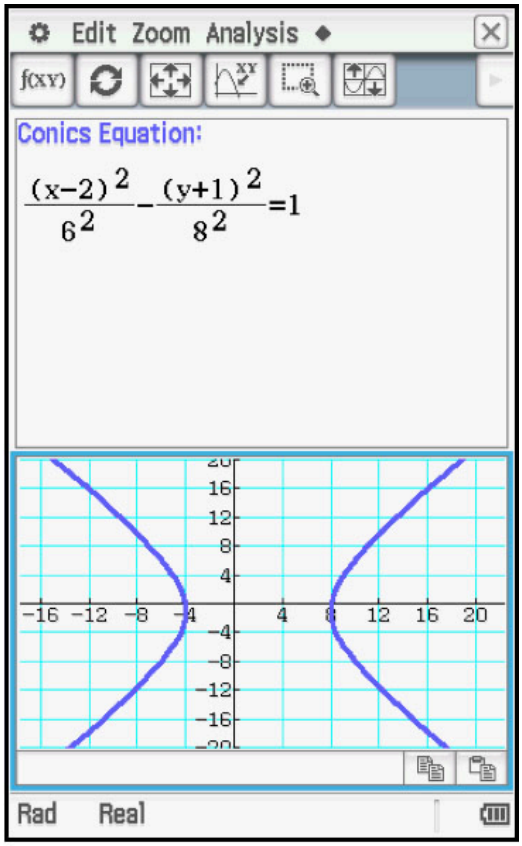

Edit the coefficients **A, B, H**, and **K**. Highlight the letter and press the key for the number. For **K**, also change from subtraction to addition.




Tap to set the window, or use shortcuts after graphing.

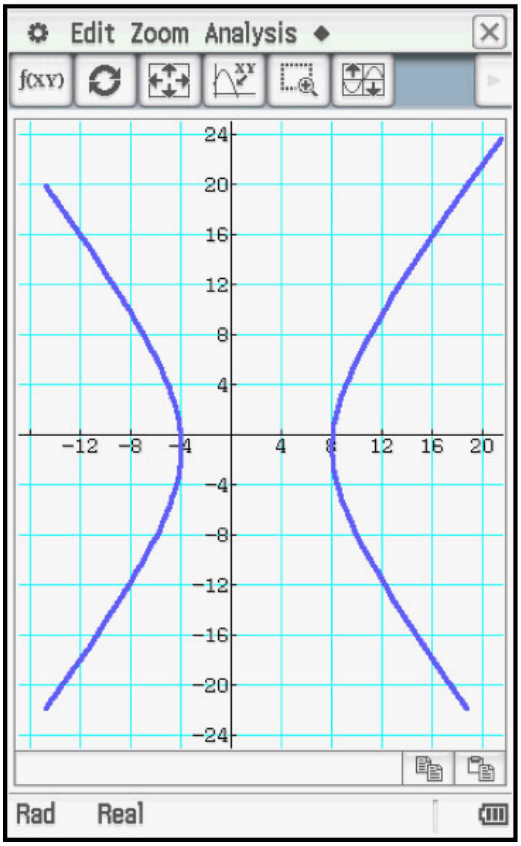
# Conic Menu

Tap ⊞ to graph.




Tap Resize to plot the graph in a full screen. You may wish to adjust the window.

The window can be easily changed by using ▼ ▲ ◀ ▶ to scroll in any of the four directions, + to zoom in, and − to zoom out.



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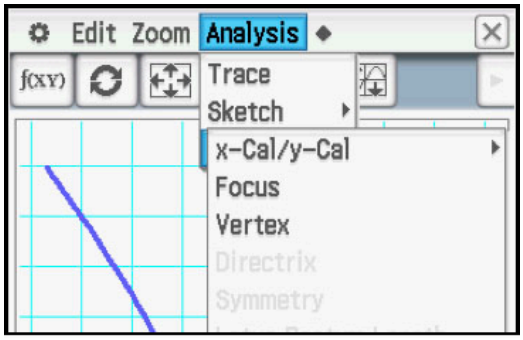
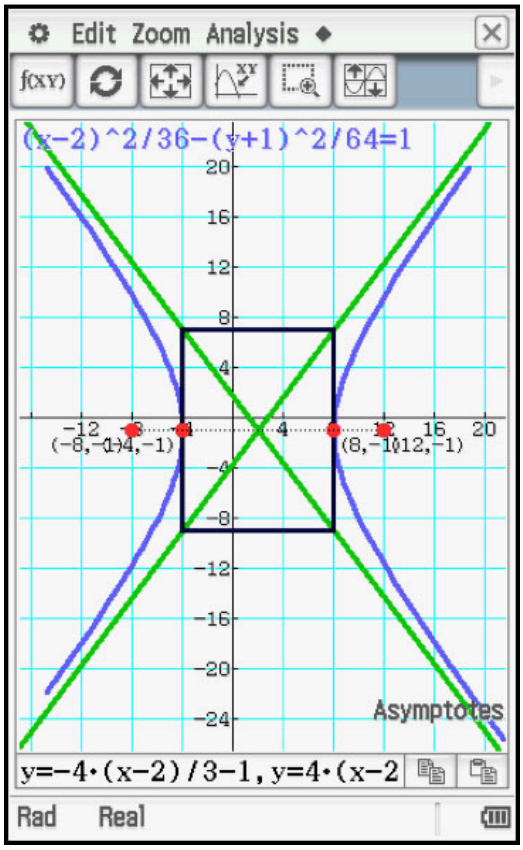
2. Display the vertices, foci, and asymptotes.

For vertices, tap **Analysis, G-Solve, Vertex.**




Press EXE to mark the point and keep the coordinates on the display. Press ◄ to display the other vertex.

Use **G-Solve** in the same manner for foci and asymptotes.



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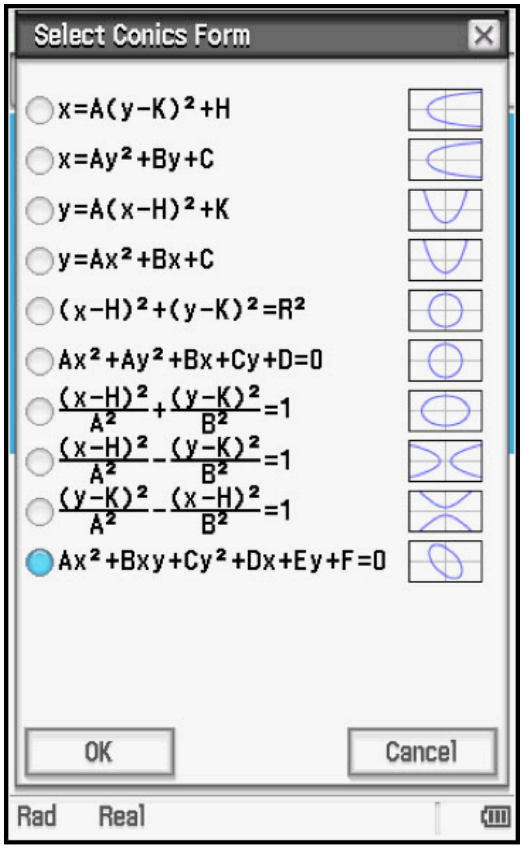
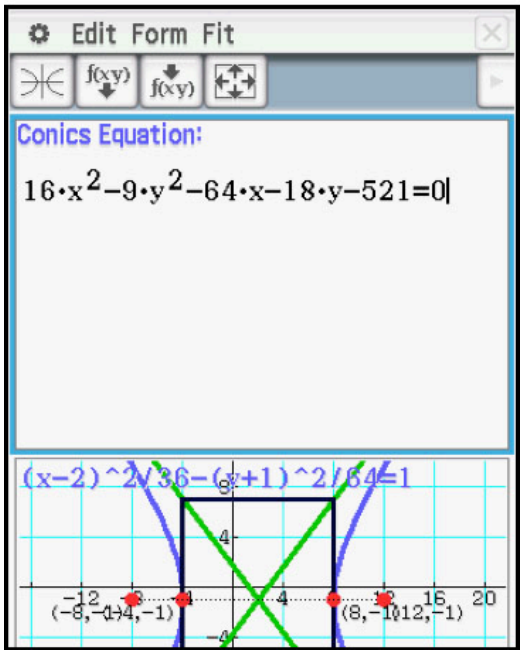
3. Convert the equation to a standard form.

Tap Resize, then tap the equation window.

Tap f(x,y), then select the bullet for general form, then tap **OK**.



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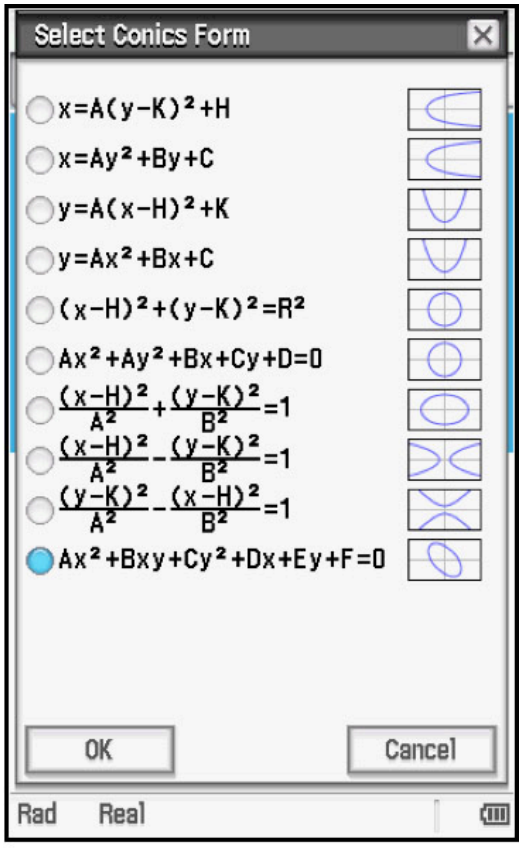
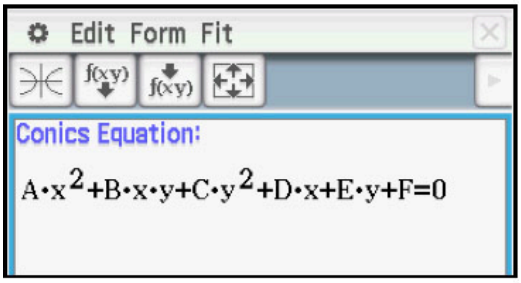
4. Graph the rotated conic
$2x^2 - 3xy + 4y^2 - 5x + 6y - 7 = 0$.

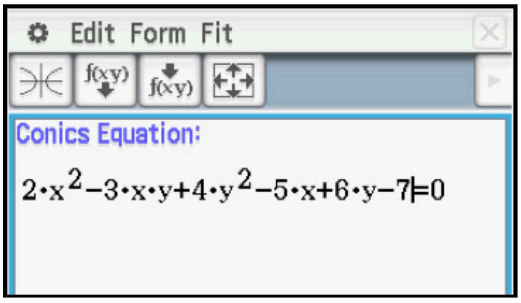
Tap f(xy).

Tap the bullet for general form, then tap **OK**.



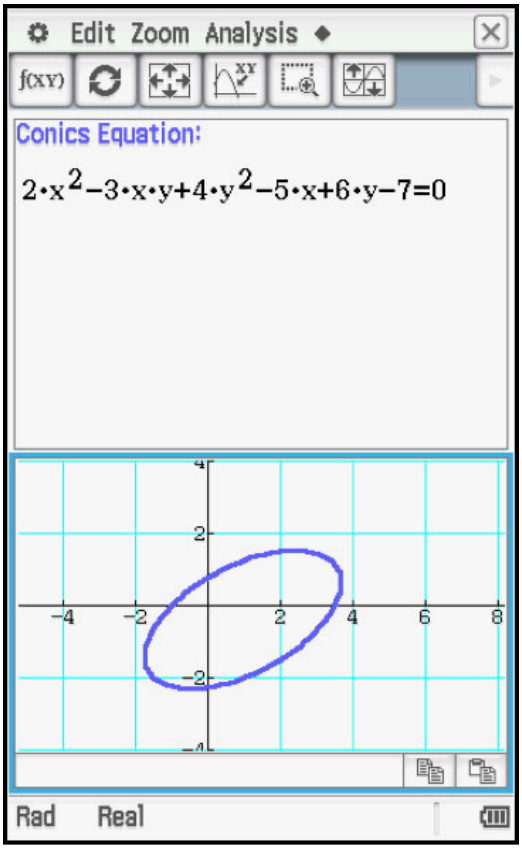

Edit the coefficients and the signs. The addition sign and the number can be highlighted together.



# Conic Menu

Tap [graph] to graph.




Again, you may tap Resize to plot the graph in a full screen.You may wish to adjust the window.

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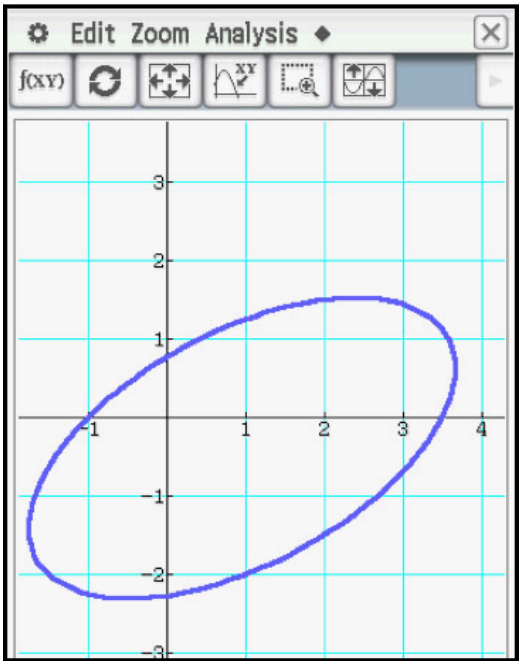

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**G-Solve** commands may be used on rotated conics.