

Conic Sections

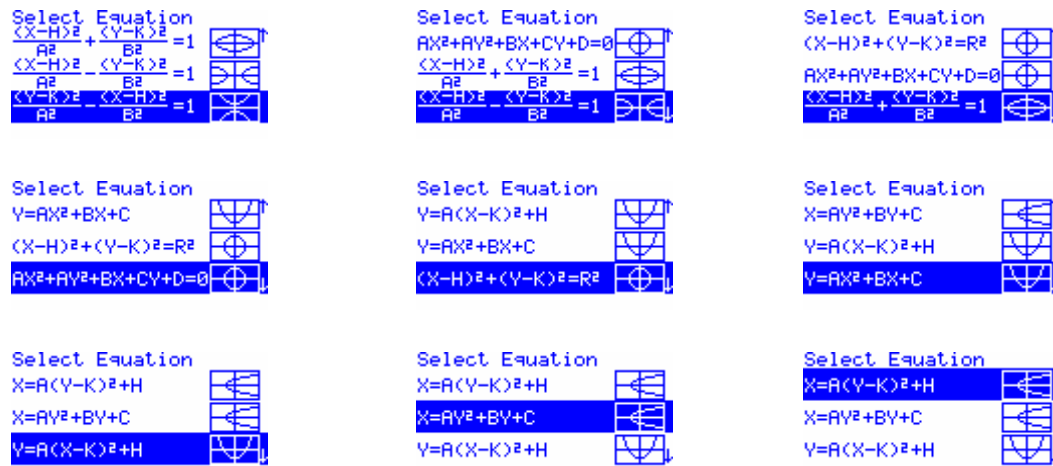
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Select CONICS mode from the main menu by using the arrow keys to highlight the CONICS icon or pressing 9.



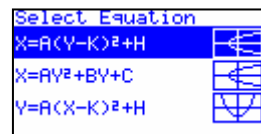
Use the arrow keys to select the conic type that you require.

Note: The different selections are for various ways of drawing and finding focal points, directrix, asymptotes and centres of the parabola, ellipse, circle and hyperbola.

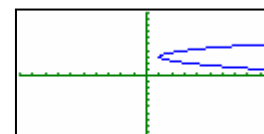
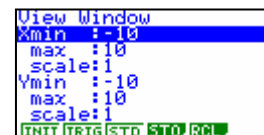


Example: Find the directrix, symmetry line, length, vertex and the focal points for the parabola $x = 2(y - 3)^2 + 1$

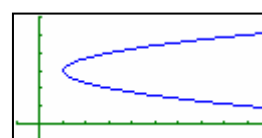
Answer: Select and press **EXE**
 $A = 2$
 $K = 3$
 $H = 1$



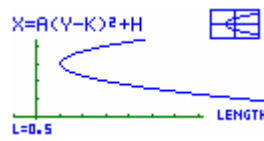
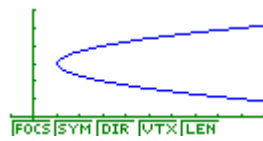
Make sure that the domain and range are set up adequately, via the V-window.
 As a 'rule of thumb' start with the V-window set at:
 Using the **F3** key, view the graph and then change the x and y settings to suitable values.



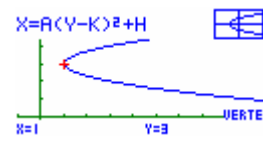
In this case:



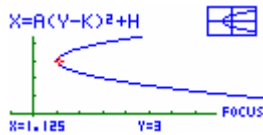
Then **G-solve** [shift F5] for each aspect of the conic section you require.



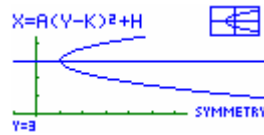
Length



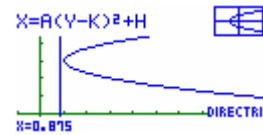
Vertex



Focus



Symmetry



Directrix

The other conic types behave in a similar fashion to the worked example above.