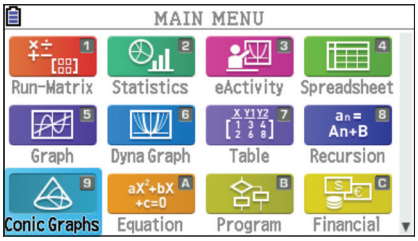
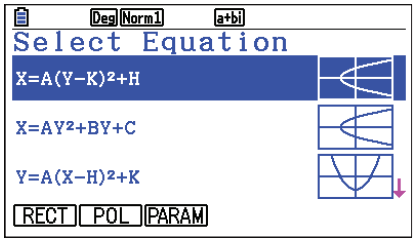
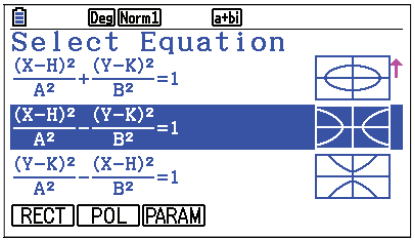
CONICS

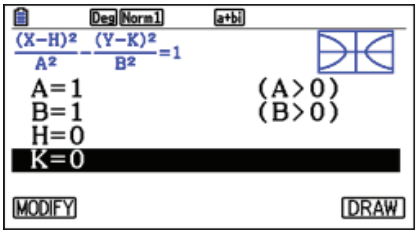
1. Construct the graph of the conic section $\frac{(x-3)^2}{4} - \frac{(y+1)^2}{16} = 1$.

From the Main Menu, press [9]. Scroll down to the correct form and press [EXE].

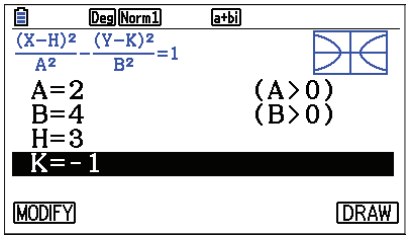


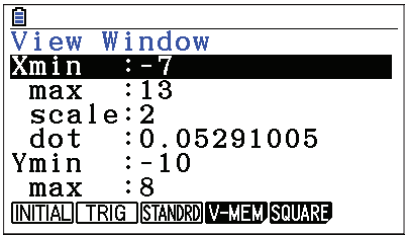


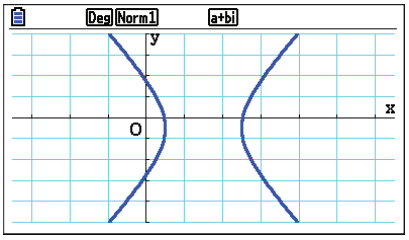




Enter the correct values. Note, the exponents in the denominators, so A = 2, rather than 4. Also, note the minus signs in the numerator, so H = 3 and K = -1. Press [EXE] after each value. As before, press [SHIFT] [F3] **(V-Window)** to change the values for the window, then press [EXIT]. To draw the graph, press [F6] (DRAW).

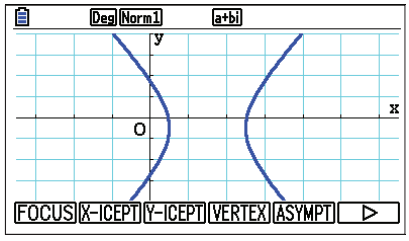


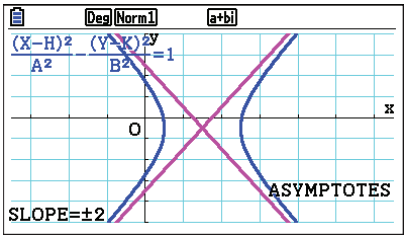




2. Find the asymptotes for the conic graph.

To draw the asymptotes, press [SHIFT] [F5] **(G-Solv)** [F5] (ASYMPT). The slope for each line is also displayed.





3. Find and label the vertices and foci for the conic graph.

To find the coordinates of the vertices, press SHIFT F5 **(G-Solv)** F4 (VERTEX). To find the coordinates of the foci, press SHIFT F5 **(G-Solv)** F1 (FOCUS). In each case, press ▶ to move to the second point. To mark points and label the coordinates on the display, press EXE.