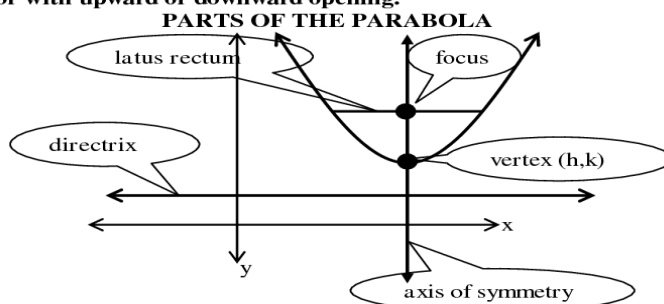# 7-2 PARABOLAS

NOTES WORKSHEET

NAME: _____ DATE:_____ PERIOD:____

I. Graphing parabolas on the graphing calculator with upward or downward opening.
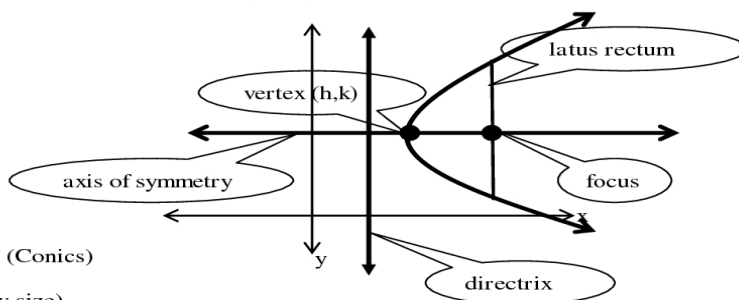
TWO FORMS FOR THE EQUATION

1. $y = ax^2 + bx + c$

2. $y = a(x-h)^2 + k$

PARTS OF THE PARABOLA

latus rectum   focus

directrix   vertex (h,k)

x

y

axis of symmetry

II. Graphing parabolas on the graphing calculator with left or right opening.

1. $x = ay^2 + by + c$

2. $x = a(y-k)^2 + h$

latus rectum

vertex (h,k)

axis of symmetry   focus

x

y

directrix

III. Graphing Calculator Steps:

1. From the main menu – choose #9 (Conics)
2. Press Shift & F3 (V window)
3. Press F3 (STD – standard window size)
4. Press Exit
5. Select appropriate equation
6. Type in information asked for
7. Press F6 (Draw)
8. Press Shift & F5 (G-SOLV)
9. Press F1 (FOCS – gives the coordinates of the focus)
10. Press Shift & F5 (G-SOLV)
11. Press F2 (SYM – gives the equation of the axis of symmetry)
12. Press Shift & F5 (G-SOLV)
13. Press F3 (DIR – gives the equation of the directrix)
14. Press Shift & F5 (G-SOLV)
15. Press F4 (VTX – gives the coordinates of the vertex)
16. Press Shift & F5 (G-SOLV)
17. Press F5 (LEN – gives the length of the latus rectum)