I. Identify each conic. Then use the rectangular form to write the parametric form of the conic.

1) $\frac{(y-3)^2}{5}-\frac{(x-2)^2}{9}=1$

2) $\frac{(x+7)^2}{16}+\frac{(y-3)^2}{144}=1$

3) $(x+4)^2+(y+7)^2=25$

4) $\frac{(x+6)^2}{25}-\frac{(y-2)^2}{49}=1$

5) $(x-3)^2+(y+11)^2=200$

6) $\frac{(x-3)^2}{81}+\frac{(y+5)^2}{20}=1$

7) $4x^2+y^2+8x-4y+4=0$

8) $4x^2+9y^2-16x-18y-11=0$

9) $x^2-y^2-2x-2y=1$

10) $4y^2-x^2-2x-16y+11=0$

11) $x^2+y^2-4x+10y=100$

II. Graph each of the parametric equations you found in part I on your calculator.

III. Use the information below to write the parametric form of the conic described.

1) Ellipse: Center at (0, 0); Foci at $(0,\pm 3)$; Vertices at $(0,\pm 5)$

2) Ellipse: Foci at (-4, 2) and (-4, 8); Vertices at (-4, 0) and (-4, 10)

3) Hyperbola: Center at (0, 0); Foci at $(0,\pm 4)$; Vertices at $(0,\pm 2)$

4) Hyperbola: Vertices at (-3, 3) and (5, 3); Foci at (-5, 3) and (7, 3)

5) Circle: Center at (2, -7); radius 4

6) Ellipse: Foci at (-3, 5) and (3, 5); Vertices at (-4, 5) and (4, 5)

7) Hyperbola: Vertices at (2, 6) and (2, 16); Foci at (2, 2) and (2, 20)

8) Ellipse: Foci at (3, 8) and (3, -6); Major axis has length 20