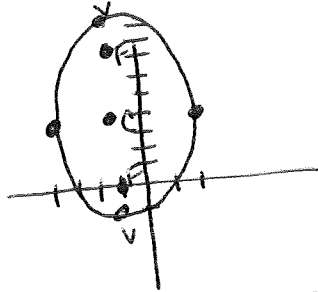


①  $\frac{(x+1)^2}{9} + \frac{(y-4)^2}{25} = 1$  Ellipse

$a = 3$  LIR

$b = 5$  UID

$c = \sqrt{|9-25|} = \sqrt{16} = 4$  UID



$C(-1, 4)$

$V(-1, 9)$

$V(-1, -1)$

$F(-1, 8)$

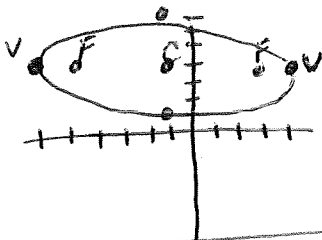
$F(-1, 0)$

②  $\frac{(x+1)^2}{25} + \frac{(y-4)^2}{9} = 1$  Ellipse

$a = 5$  LIR

$b = 3$  UID

$c = \sqrt{|25-9|} = \sqrt{16} = 4$  LIR



$C(-1, 4)$

$V(-6, 4)$

$V(4, 4)$

$F(-5, 4)$

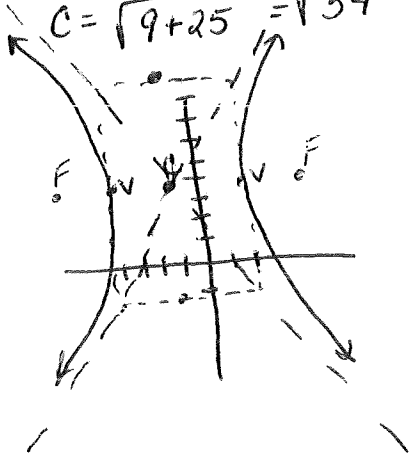
$F(3, 4)$

③  $\frac{(x+1)^2}{9} - \frac{(y-4)^2}{25} = 1$  Hyperbola

$a = 3$  LIR

$b = 5$  UID

$c = \sqrt{9+25} = \sqrt{34} \approx 5.8$  LIR



$C(-1, 4)$

$V(-4, 4)$

$V(2, 4)$

$F(-1-\sqrt{34}, 4)$

$F(-1+\sqrt{34}, 4)$

$y-4 = \pm \frac{5}{3}(x+1)$

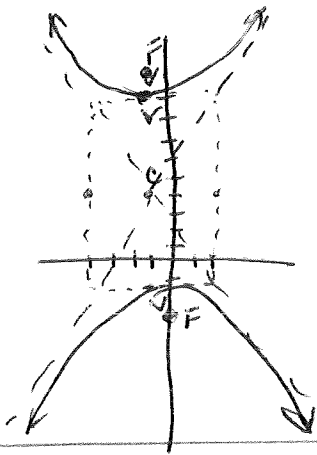
$$(4) \quad \frac{(y-4)^2}{25} - \frac{(x+1)^2}{9} = 1$$

Hyperbola

$$a = 3 \text{ L/R}$$

$$b = 5 \text{ U/D}$$

$$c = \sqrt{9+25} = \sqrt{34} \approx 5.8 \text{ U/D}$$



$$C (-1, 4)$$

$$V (-1, 9)$$

$$V (-1, -1)$$

$$F (-1, 4 + \sqrt{34})$$

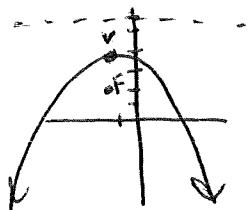
$$F (-1, 4 - \sqrt{34})$$

$$y - 4 = \pm \frac{5}{3} (x + 1)$$

$$(5) \quad (x+1)^2 = 4(-2)(y-4)$$

Parabola

$$p = -2 < 0 \text{ opens down}$$



$$V (-1, 4)$$

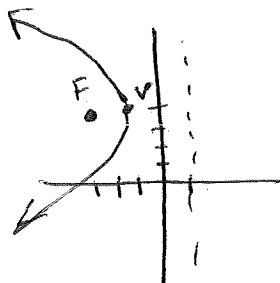
$$F (-1, 2)$$

$$y = 6$$

$$(6) \quad (y-4)^2 = 4(-2)(x+1)$$

parabola

$$p = -2 \text{ opens left}$$



$$V (-1, 4)$$

$$F (-3, 4)$$

$$x = 1$$