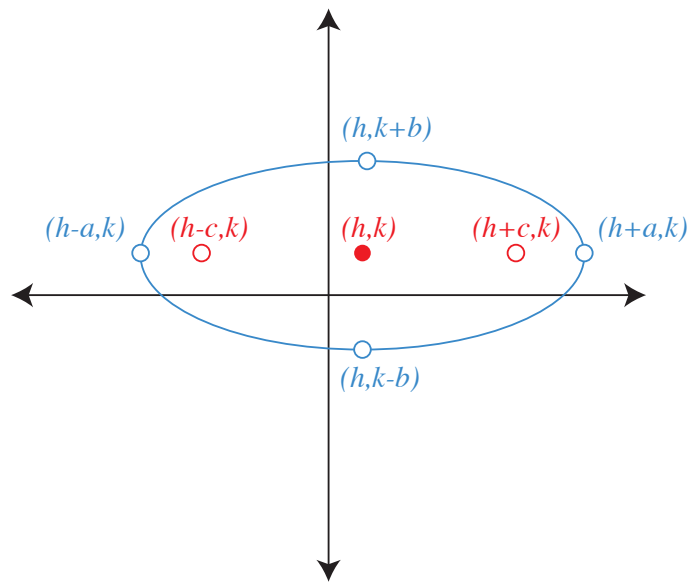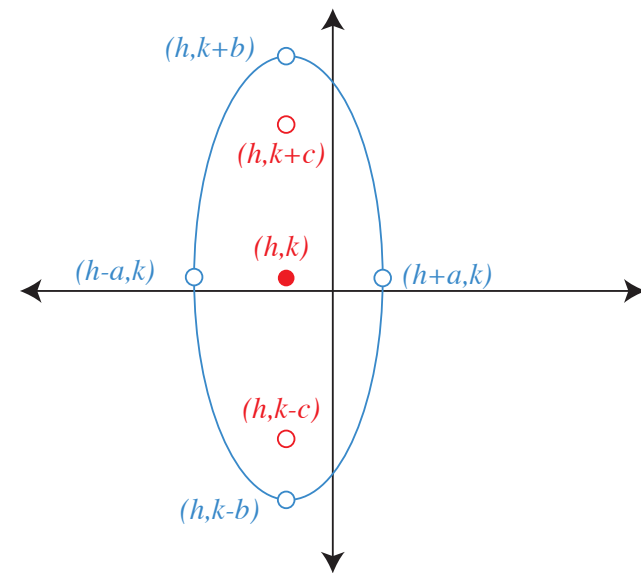$$\frac{(x-h)^2}{a^2} + \frac{(y-k)^2}{b^2} = 1$$
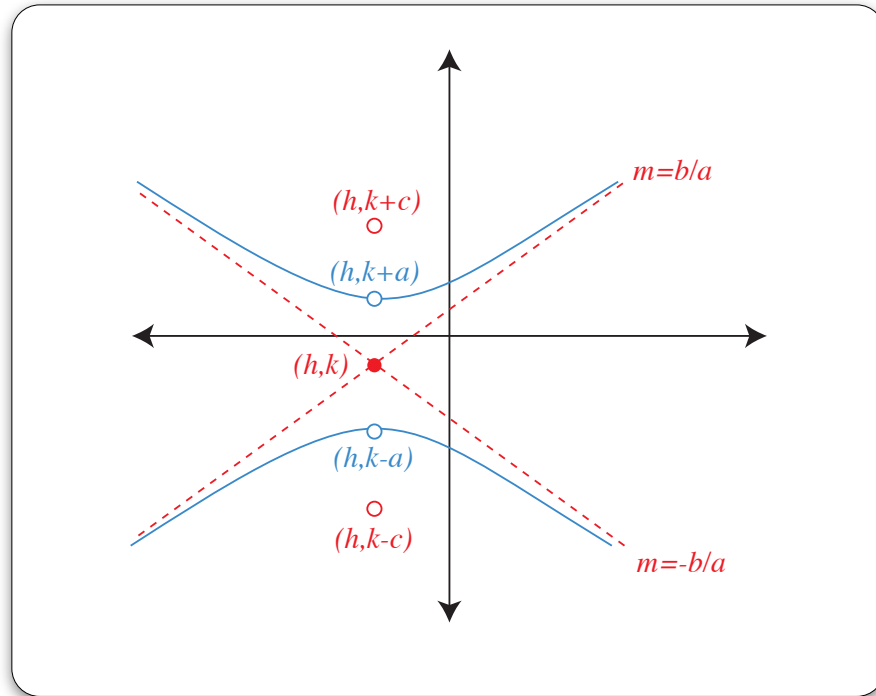

$(a > b, c^2 = a^2 - b^2)$

$(b > a, c^2 = b^2 - a^2)$

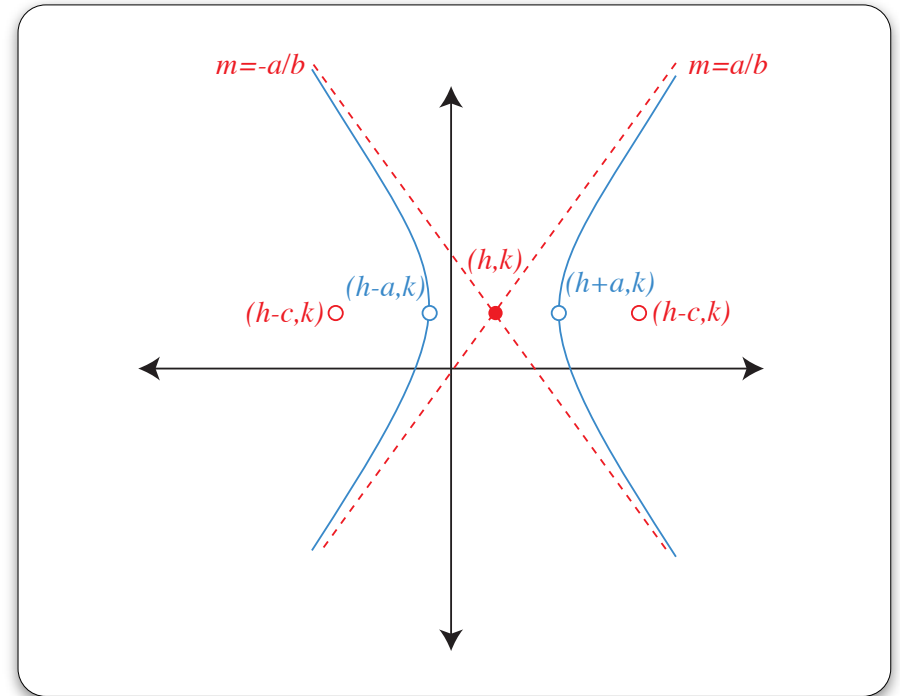# The ellipse

$$(c^2 = a^2 + b^2)$$

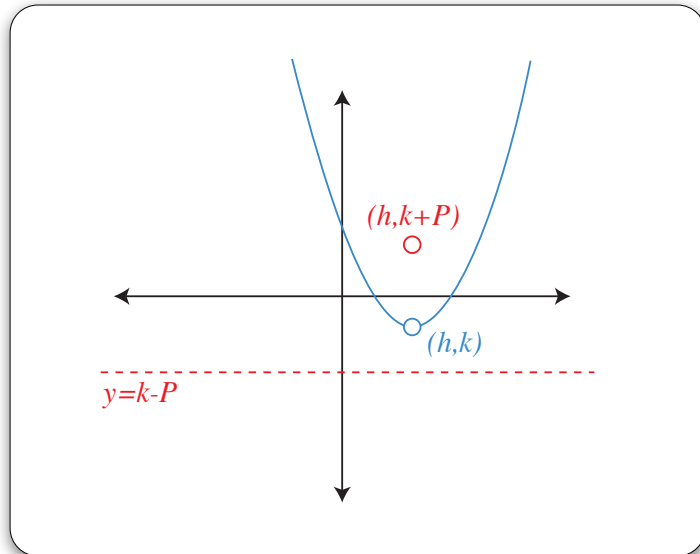$$\frac{(y-k)^2}{a^2} - \frac{(x-h)^2}{b^2} = 1$$
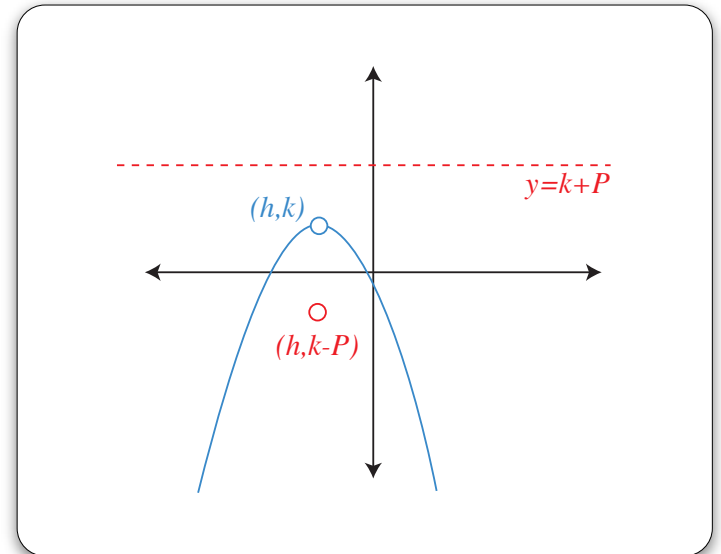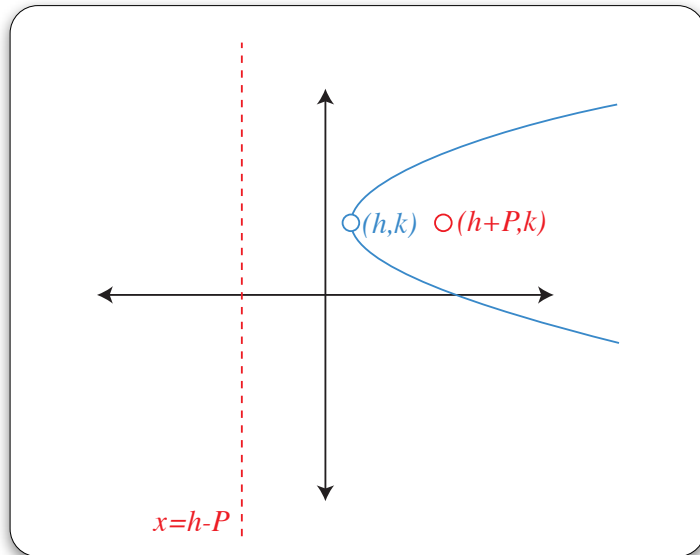
$$\frac{(x-h)^2}{a^2} - \frac{(y-k)^2}{b^2} = 1$$

m=b/a

(h,k+c)

(h,k+a)

(h,k)

(h,k-a)

(h,k-c)

m=-b/a

m=-a/b

m=a/b

(h,k)

(h-a,k)

(h+a,k)

(h-c,k)

(h-c,k)

The hyperbola

$$y - k = \frac{(x-h)^2}{4P}$$

(h,k+P)

(h,k)

y=k-P

$$y - k = \frac{-(x-h)^2}{4P}$$

y=k+P

(h,k)

(h,k-P)

The
parabola

(h,k)   (h+P,k)

x=h-P

$$x - h = \frac{(y-k)^2}{4P}$$

(h-P,k)

(h,k)

x=h+P

$$x - h = \frac{-(y-k)^2}{4P}$$