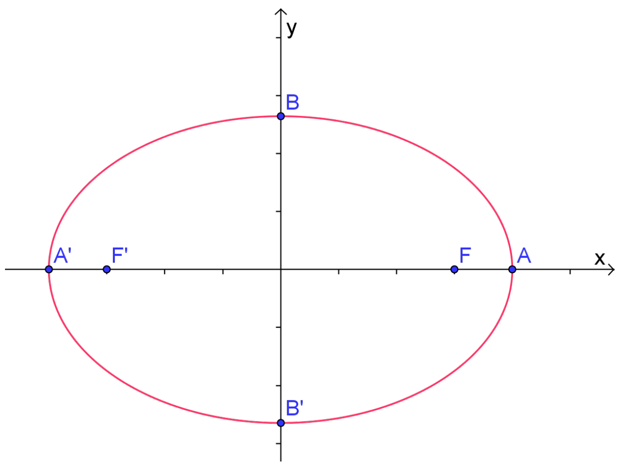
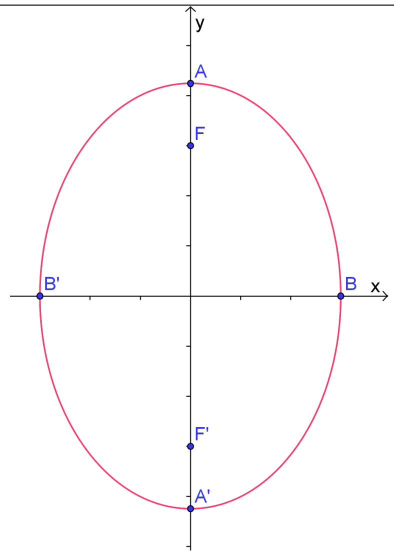
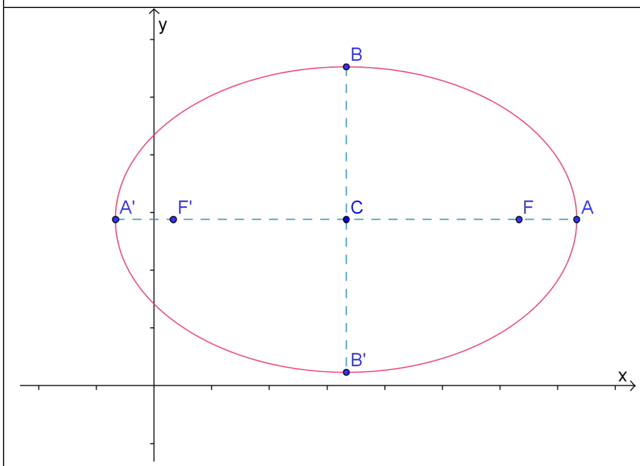
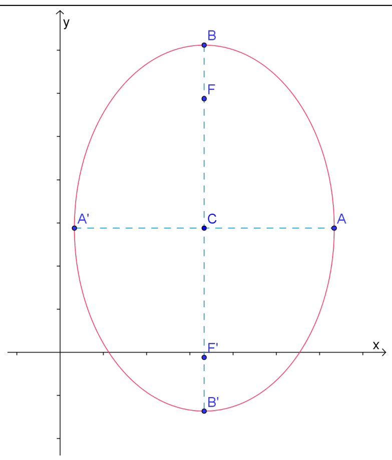
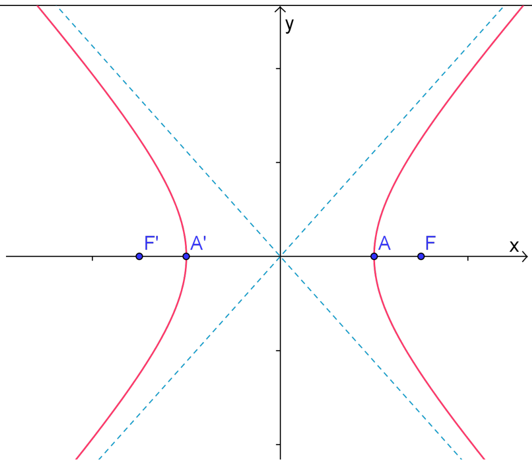
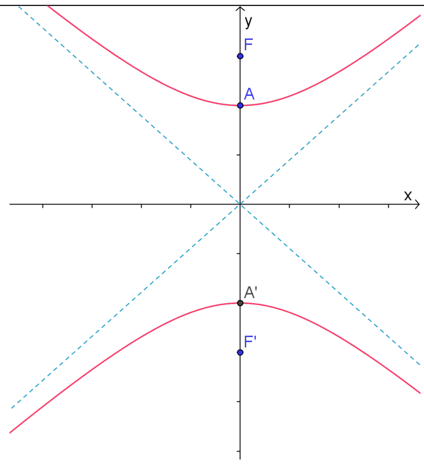
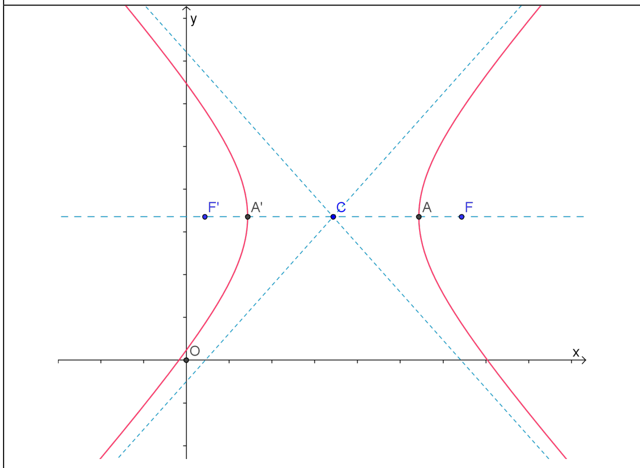
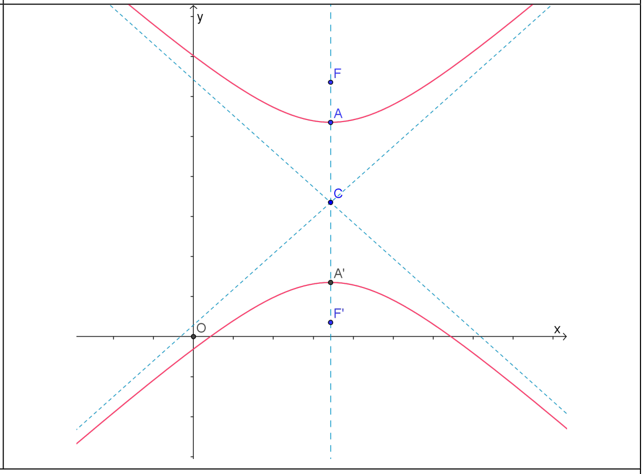
0.1 L'ellipse

<table>
<tr><td colspan="2">Ellipse centrée en $O(0,0)$</td></tr>
<tr><td>Axe focal Ox</td><td>Axe focal Oy</td></tr>
<tr><td>$$\frac{x^2}{a^2}+\frac{y^2}{b^2}=1$$</td><td>$$\frac{x^2}{b^2}+\frac{y^2}{a^2}=1$$</td></tr>
<tr><td>$a>b$</td><td>$a>b$</td></tr>
<tr><td>
</td><td>
</td></tr>
<tr><td colspan="2">Sommets</td></tr>
<tr><td>$A(a,0)$
$A'(-a,0)$
$B(0,b)$
$B'(0,-b)$</td><td>$A(0,a)$
$A'(0,-a)$
$B(b,0)$
$B'(-b,0)$</td></tr>
<tr><td colspan="2">Foyers</td></tr>
<tr><td>$F(c,0)$
$F'(-c,0)$</td><td>$F(0,c)$
$F'(0,-c)$</td></tr>
<tr><td colspan="2">$c^2=a^2-b^2$</td></tr>
<tr><td colspan="2">Tangente au point $A(x_A,y_A)$</td></tr>
<tr><td>$$\frac{xx_A}{a^2}+\frac{yy_A}{b^2}=1$$</td><td>$$\frac{yy_A}{a^2}+\frac{xx_A}{b^2}=1$$</td></tr>
</table>

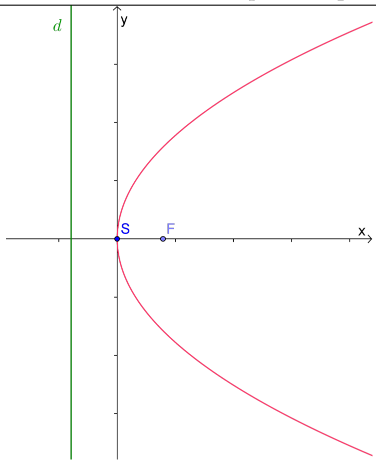
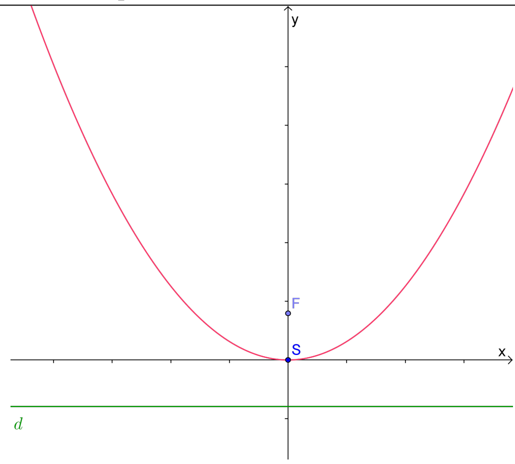
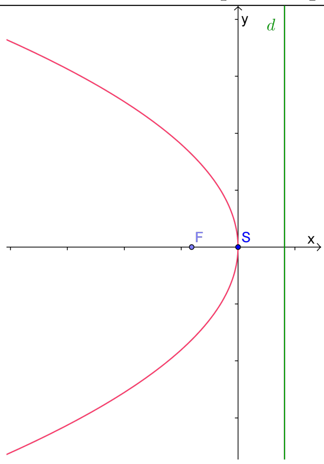
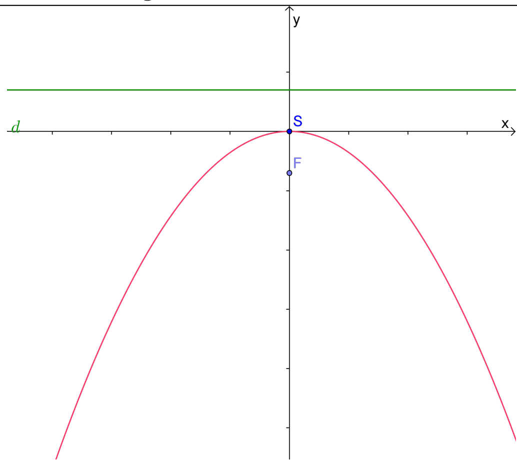
<table>
<tr><td colspan="2">Ellipse centrée en $C(x_C, y_C)$</td></tr>
<tr><td>Axe focal Ox</td><td>Axe focal Oy</td></tr>
<tr><td>$$\frac{(x-x_C)^2}{a^2}+\frac{(y-y_C)^2}{b^2}=1$$</td><td>$$\frac{(x-x_C)^2}{b^2}+\frac{(y-y_C)^2}{a^2}=1$$</td></tr>
<tr><td>$a > b$</td><td>$a > b$</td></tr>
<tr><td>
</td><td>
</td></tr>
<tr><td colspan="2">Sommets</td></tr>
<tr><td>$A(a+x_C, y_C)$
$A'(-a+x_C, y_C)$
$B(x_C, b+y_C)$
$B'(x_C, -b+y_C)$</td><td>$A(x_C, a+y_C)$
$A'(x_C, -a+y_C)$
$B(b+x_C, y_C)$
$B'(-b+x_C, y_C)$</td></tr>
<tr><td colspan="2">Foyers</td></tr>
<tr><td>$F(c+x_C, y_C)$
$F'(-c+x_C, y_C)$</td><td>$F(x_C, c+y_C)$
$F'(x_C, -c+y_C)$</td></tr>
<tr><td colspan="2">$c^2 = a^2 - b^2$</td></tr>
<tr><td colspan="2">Tangente au point $A(x_A, y_A)$</td></tr>
<tr><td>$$\frac{(x-x_A)(x_A-x_C)}{a^2}+\frac{(y-y_A)(y_A-y_C)}{b^2}=0$$</td><td>$$\frac{(x-x_A)(x_A-x_C)}{b^2}+\frac{(y-y_A)(y_A-y_C)}{a^2}=0$$</td></tr>
</table>

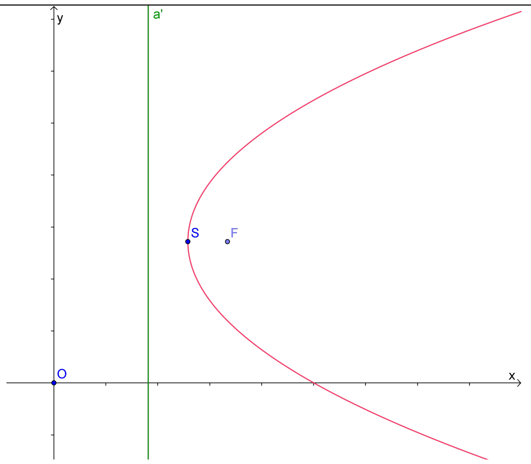
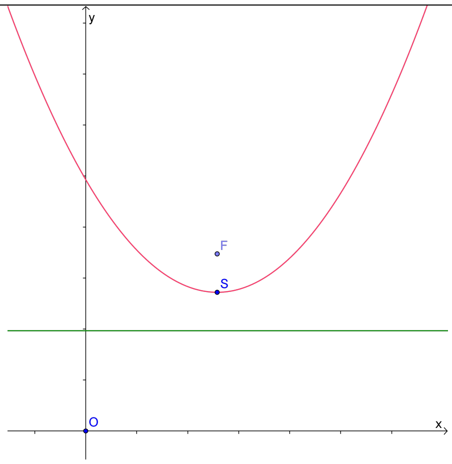
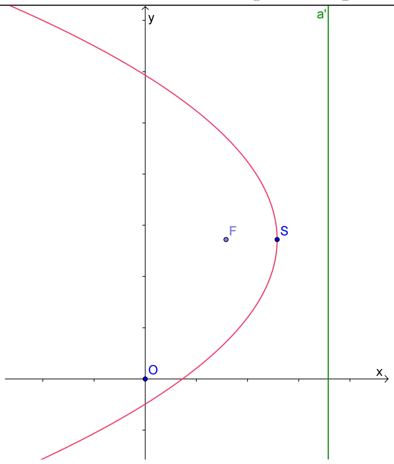
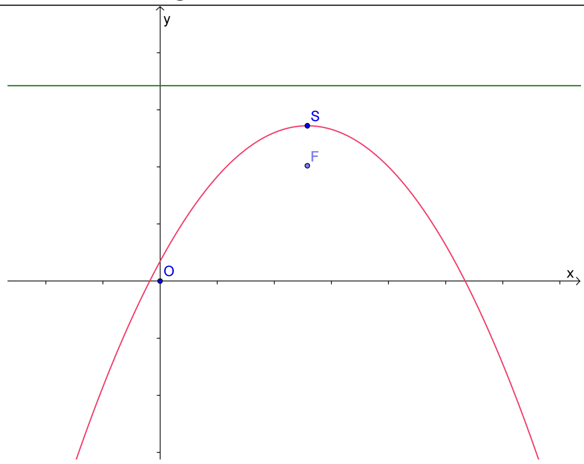
0.2 L'hyperbole

Hyperbole centrée en $O(0,0)$	
Axe focal Ox	Axe focal Oy
$\dfrac{x^2}{a^2} - \dfrac{y^2}{b^2} = 1$	$\dfrac{y^2}{a^2} - \dfrac{x^2}{b^2} = 1$
	
Sommets	
$A(a,0)$ $A'(-a,0)$	$A(0,a)$ $A'(0,-a)$
Foyers	
$F(c,0)$ $F'(-c,0)$	$F(0,c)$ $F'(0,-c)$
$c^2 = a^2 + b^2$	
Asymptotes	
$AO \equiv y = \pm\dfrac{b}{a}x$	$AO \equiv y = \pm\dfrac{a}{b}x$
Tangente au point $A(x_A, y_A)$	
$\dfrac{xx_A}{a^2} - \dfrac{yy_A}{b^2} = 1$	$\dfrac{yy_A}{a^2} - \dfrac{xx_A}{b^2} = 1$

<table>
<tr><td colspan="2">Hyperbole centrée en $C(x_C, y_C)$</td></tr>
<tr><td>Axe focal Ox</td><td>Axe focal Oy</td></tr>
<tr><td>$$\frac{(x-x_C)^2}{a^2} - \frac{(y-y_C)^2}{b^2} = 1$$</td><td>$$\frac{(y-y_C)^2}{a^2} - \frac{(x-x_C)^2}{b^2} = 1$$</td></tr>
<tr><td>
</td><td>
</td></tr>
<tr><td colspan="2">Sommets</td></tr>
<tr><td>$A(a + x_C, y_C)$
$A'(-a + x_C, y_C)$</td><td>$A(x_C, a + y_C)$
$A'(x_C, -a + y_C)$</td></tr>
<tr><td colspan="2">Foyers</td></tr>
<tr><td>$F(c + x_C, y_C)$
$F'(-c + x_C, y_C)$</td><td>$F(x_C, c + y_C)$
$F'(x_C, -c + y_C)$</td></tr>
<tr><td colspan="2">$c^2 = a^2 + b^2$</td></tr>
<tr><td colspan="2">Asymptotes</td></tr>
<tr><td>$AO \equiv (y - y_C) = \pm\frac{b}{a}(x - x_C)$</td><td>$AO \equiv (y - y_C) = \pm\frac{a}{b}(x - x_C)$</td></tr>
<tr><td colspan="2">Tangente au point $A(x_A, y_A)$</td></tr>
<tr><td>$$\frac{(x-x_A)(x_A-x_C)}{a^2} - \frac{(y-y_A)(y_A-y_C)}{b^2} = 0$$</td><td>$$\frac{(x-x_A)(x_A-x_C)}{b^2} - \frac{(y-y_A)(y_A-y_C)}{a^2} = 0$$</td></tr>
</table>

0.3 La parabole

Parabole de sommet $O(0,0)$	
Axe focal Ox	Axe focal Oy
$y^2 = 2px$	$x^2 = 2py$
$p > 0$: parabole dirigée vers les axes positifs	
	
$p < 0$: parabole dirigée vers les axes négatifs	
	
Sommets	
$S(0,0)$	$S(0,0)$
Foyers	
$F : \left(\frac{p}{2}, 0\right)$	$F : \left(0, \frac{p}{2}\right)$
Directrice	
$d \equiv x = -\frac{p}{2}$	$d \equiv y = -\frac{p}{2}$
Tangente au point $A(x_A, y_A)$	
$yy_A = p(x + x_A)$	$xx_A = p(y + y_A)$

Parabole de sommet $S(x_S, y_S)$	
Axe focal Ox	Axe focal Oy
$(y - y_S)^2 = 2p(x - x_S)$	$(x - x_S)^2 = 2p(y - y_S)$
	
$p < 0$: parabole dirigée vers les axes négatifs	
	
Sommets	
$S(x_S, y_S)$	$S(x_S, y_S)$
Foyers	
$F\left(\frac{p}{2} + x_S, y_S\right)$	$F\left(x_S, y_S + \frac{p}{2}\right)$
Directrice	
$d \equiv x = x_S - \frac{p}{2}$	$d \equiv y = y_S - \frac{p}{2}$
Tangente au point $A(x_A, y_A)$	
$(y - y_A)(y_A - y_S) = p(x - x_A)$	$(x - x_A)(x_A - x_S) = p(y - y_A)$