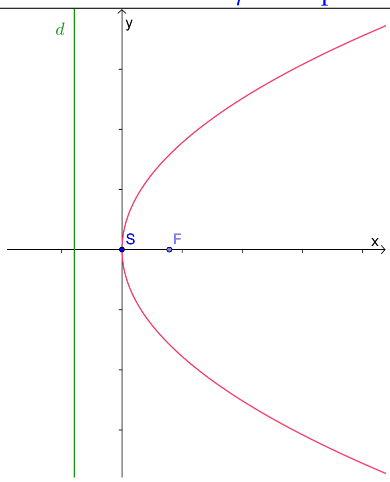
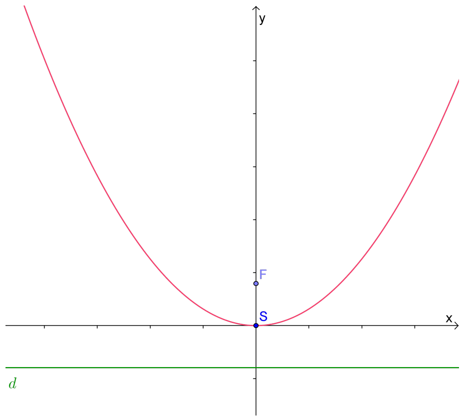
1 La parabole

<table>
<tr><td colspan="2">Parabole de sommet $O(0,0)$</td></tr>
<tr><td colspan="2">p est la distance entre le foyer et la directrice</td></tr>
<tr><td>Axe focal Ox</td><td>Axe focal Oy</td></tr>
<tr><td>$y^2 = 2px$</td><td>$x^2 = 2py$</td></tr>
<tr><td colspan="2">$p > 0$: parabole dirigée vers les axes positifs</td></tr>
<tr><td>
</td><td>
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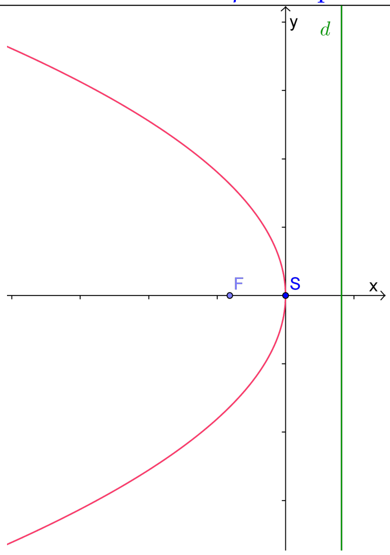
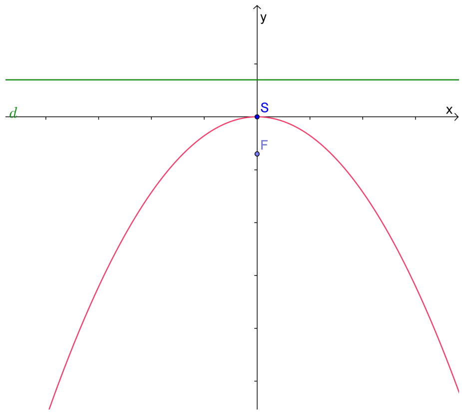
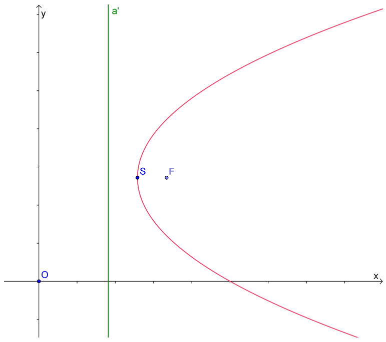
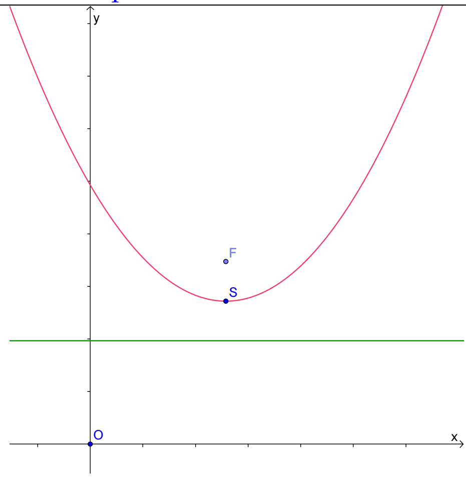
<tr><td colspan="2">$p < 0$: parabole dirigée vers les axes négatifs</td></tr>
<tr><td>
</td><td>
</td></tr>
<tr><td colspan="2">Sommets</td></tr>
<tr><td>$S(0,0)$</td><td>$S(0,0)$</td></tr>
<tr><td colspan="2">Foyers</td></tr>
<tr><td>$F : \left(\frac{p}{2}, 0\right)$</td><td>$F : \left(0, \frac{p}{2}\right)$</td></tr>
<tr><td colspan="2">Directrice</td></tr>
<tr><td>$d \equiv x = -\frac{p}{2}$</td><td>$d \equiv y = -\frac{p}{2}$</td></tr>
<tr><td colspan="2">Tangente au point $A(x_A, y_A)$ de la parabole</td></tr>
<tr><td>$yy_A = p(x + x_A)$</td><td>$xx_A = p(y + y_A)$</td></tr>
</table>

<table>
<tr><th colspan="2">Parabole de sommet $S(x_S, y_S)$</th></tr>
<tr><td>Axe focal parallèle à Ox</td><td>Axe focal parallèle à Oy</td></tr>
<tr><td>$(y - y_S)^2 = 2p(x - x_S)$</td><td>$(x - x_S)^2 = 2p(y - y_S)$</td></tr>
<tr><td colspan="2">$p > 0$: parabole dirigée vers les axes positifs</td></tr>
<tr><td>
</td><td>
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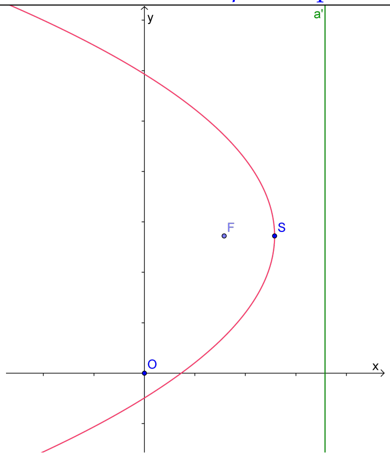
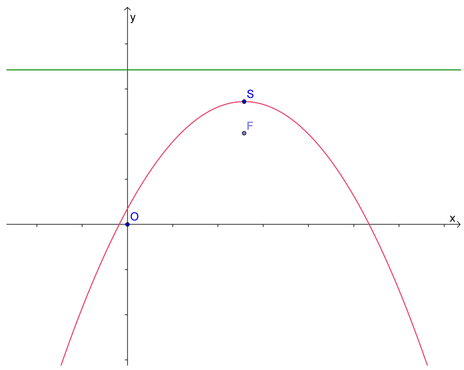
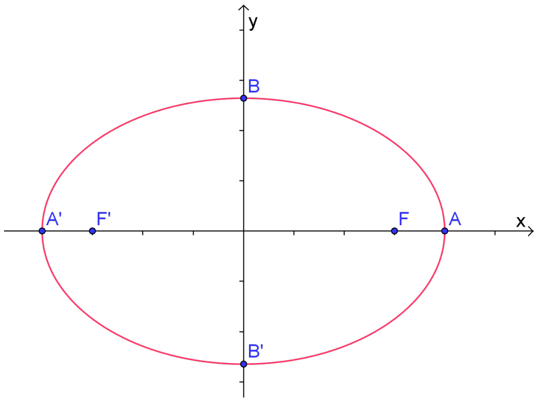
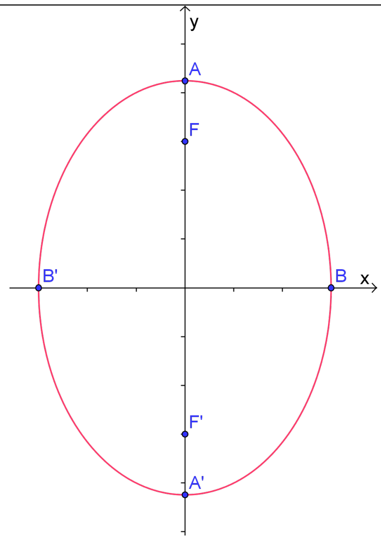
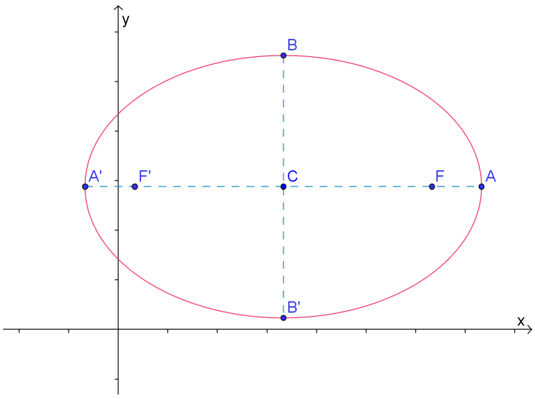
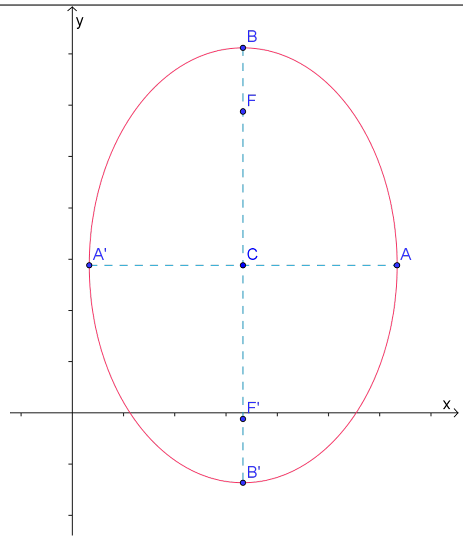
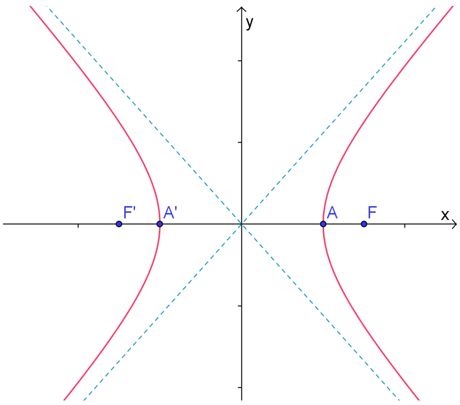
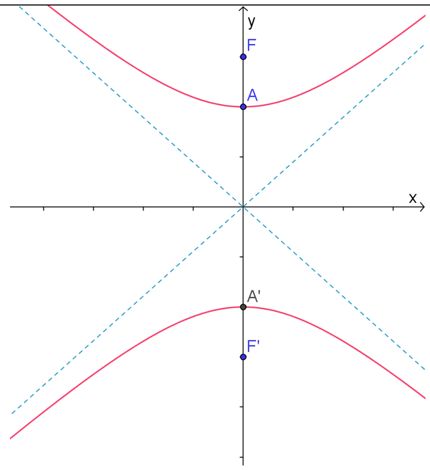
<tr><td>
</td><td>
</td></tr>
<tr><td colspan="2">Sommets</td></tr>
<tr><td>$S(x_S, y_S)$</td><td>$S(x_S, y_S)$</td></tr>
<tr><td colspan="2">Foyers</td></tr>
<tr><td>$F\left(\frac{p}{2} + x_X, y_S\right)$</td><td>$F\left(x_S, y_S + \frac{p}{2}\right)$</td></tr>
<tr><td colspan="2">Directrice</td></tr>
<tr><td>$d \equiv x = x_S - \frac{p}{2}$</td><td>$d \equiv y = y_S - \frac{p}{2}$</td></tr>
</table>

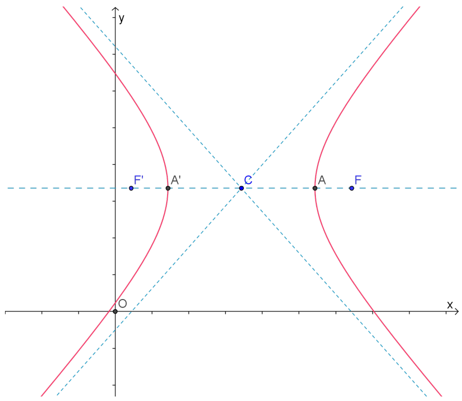
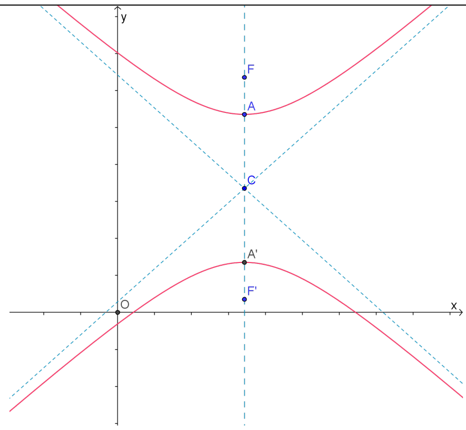
2 L'ellipse

Ellipse centrée en $O(0,0)$	
Axe focal Ox	Axe focal Oy
$\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$	$\frac{x^2}{b^2} + \frac{y^2}{a^2} = 1$
	
Sommets	
$A(a,0)$ $A'(-a,0)$ $B(0,b)$ $B'(0,-b)$	$A(0,a)$ $A'(0,-a)$ $B(b,0)$ $B'(-b,0)$
Foyers	
$F(c,0)$ $F'(-c,0)$	$F(0,c)$ $F'(0,-c)$
$c^2 = a^2 - b^2$	
Tangente au point $A(x_A, y_A)$ de l'ellipse	
$\frac{xx_A}{a^2} + \frac{yy_A}{b^2} = 1$	$\frac{yy_A}{a^2} + \frac{xx_A}{b^2} = 1$

Ellipse centrée en $C(x_C, y_C)$	
Axe focal parallèle à Ox	Axe focal parallèle à Oy
$\frac{(x-x_C)^2}{a^2}+\frac{(y-y_C)^2}{b^2}=1$	$\frac{(x-x_C)^2}{b^2}+\frac{(y_yc)^2}{a^2}=1$
	
Sommets	
$A(a+x_C, y_C)$ $A'(-a+x_C, y_C)$ $B(x_C, b+y_C)$ $B'(x_C, -b+y_C)$	$A(x_C, a+y_C)$ $A'(x_C, -a+y_C)$ $B(b+x_C, y_C)$ $B'(-b+x_C, y_C)$
Foyers	
$F(c+x_C, y_C)$ $F'(-c+x_C, y_C)$	$F(x_C, c+y_C)$ $F'(x_C, -c+y_C)$
$c^2=a^2-b^2$	

3 L'hyperbole

Hyperbole centrée en $O(0,0)$	
Axe focal Ox	Axe focal Oy
$\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1$	$\frac{y^2}{a^2} - \frac{x^2}{b^2} = 1$
	
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	
$AO \equiv y = \pm\frac{b}{a}x$	$AO \equiv y = \pm\frac{a}{b}x$
Tangente au point $A(x_A, y_A)$ de l'hyperbole	
$\frac{xx_A}{a^2} - \frac{yy_A}{b^2} = 1$	$\frac{yy_A}{a^2} - \frac{xx_A}{b^2} = 1$

Hyperbole centrée en $C(x_C, y_C)$	
Axe focal parallèle à Ox	Axe focal parallèle à Oy
$$\frac{(x-x_C)^2}{a^2} - \frac{(y-y_C)^2}{b^2} = 1$$	$$\frac{(y-y_C)^2}{a^2} - \frac{(x-x_C)^2}{b^2} = 1$$
	
Sommets	
$A(a+x_C, y_C)$ $A'(-a+x_C, y_C)$	$A(x_C, a+y_C)$ $A'(x_C, -a+y_C)$
Foyers	
$F(c+x_C, y_C)$ $F'(-c+x_C, y_C)$	$F(x_C, c+y_C)$ $F'(x_C, -c+y_C)$
$c^2 = a^2 + b^2$	
Asymptotes	
$AO \equiv (y-y_C) = \pm\frac{b}{a}(x-x_C)$	$AO \equiv (y-y_C) = \pm\frac{a}{b}(x-x_C)$