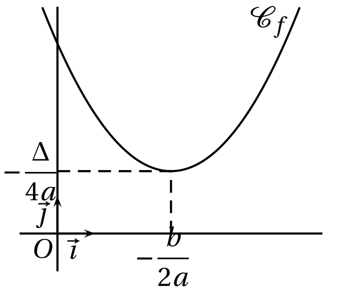
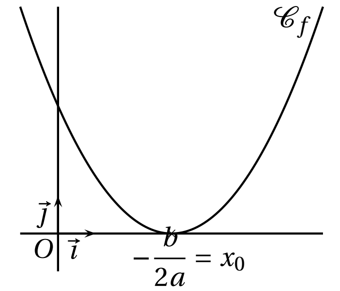
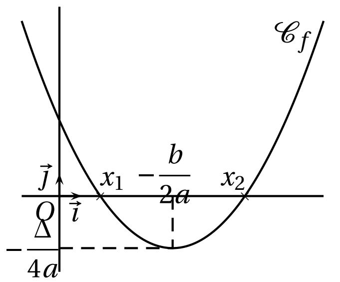
Propriété 7 *Tableau synoptique*

<table>
<tr><th></th><th>$\Delta < 0$</th><th>$\Delta = 0$</th><th>$\Delta > 0$</th></tr>
<tr><td>Racine(s) réelles de f</td><td>Pas de racine réelle</td><td>Une seule racine réelle : $x_0 = -\dfrac{b}{2a}$</td><td>Deux racines réelles distinctes : $x_1 = \dfrac{-b-\sqrt{\Delta}}{2a}$ et $x_2 = \dfrac{-b+\sqrt{\Delta}}{2a}$</td></tr>
<tr><td>Factorisation de $f(x)$ dans $\mathbb{R}$</td><td>Pas de factorisation</td><td>$f(x) = a(x-x_0)^2$</td><td>$f(x) = a(x-x_1)(x-x_2)$</td></tr>
<tr><td>Courbe représentative de f et signe de $f(x)$ sur $\mathbb{R}$ lorsque $a > 0$</td>
<td>

<table><tr><td>x</td><td>$-\infty$ $+\infty$</td></tr><tr><td>$f(x)$</td><td>$+$</td></tr></table></td>
<td>

<table><tr><td>x</td><td>$-\infty$ x_0 $+\infty$</td></tr><tr><td>$f(x)$</td><td>$+$ 0 $+$</td></tr></table></td>
<td>

<table><tr><td>x</td><td>$-\infty$ x_1 x_2 $+\infty$</td></tr><tr><td>$f(x)$</td><td>$+$ 0 $-$ 0 $+$</td></tr></table></td></tr>
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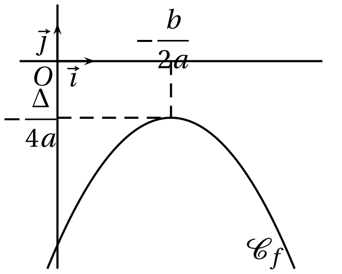
<td>

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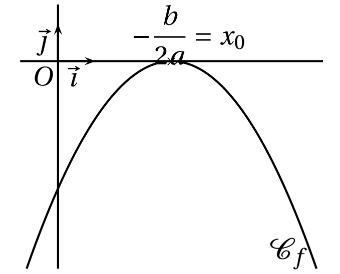
<td>

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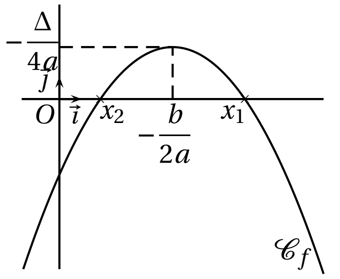
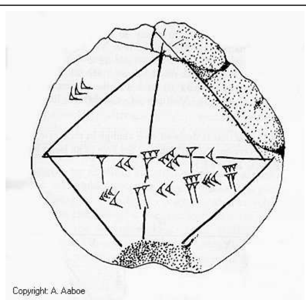
<td>

<table><tr><td>x</td><td>$-\infty$ x_2 x_1 $+\infty$</td></tr><tr><td>$f(x)$</td><td>$-$ 0 $+$ 0 $-$</td></tr></table></td></tr>
</table>

Approximation babylonienne de $\sqrt{2}$.



Source : http://it.stlawu.edu/~dmelvill/mesomath/tablets/YBC7289.html