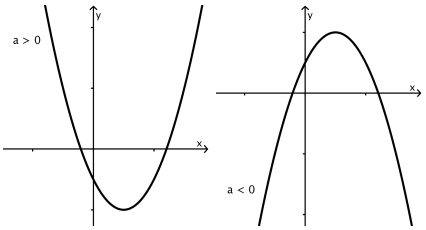
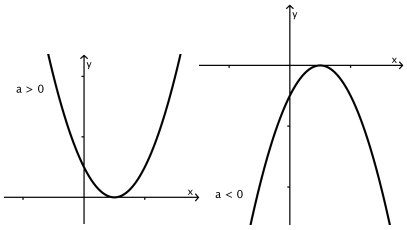
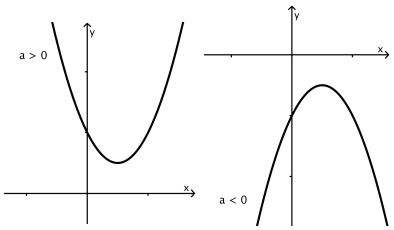
$\Delta > 0$
2 real unequal
(different) roots

$\Delta = 0$
1 real root or
2 equal roots

$\Delta < 0$
no real roots







If Δ is a perfect square, the roots are rational.
If Δ is not a perfect square, the roots are irrational.

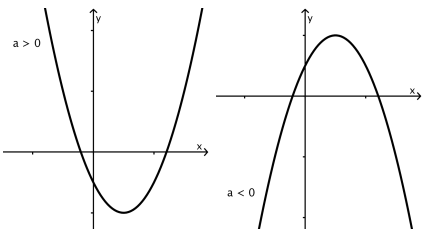
positive definite negative definite

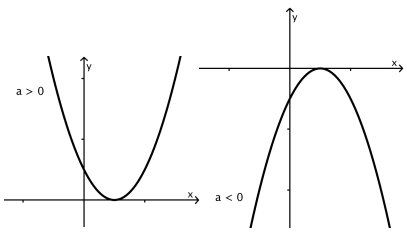
The Discriminant $\Delta = b^2 - 4ac$

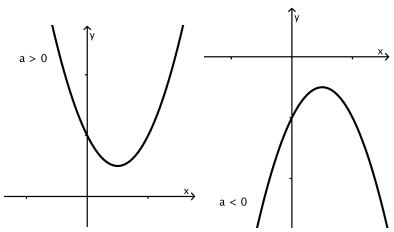
$\Delta > 0$
2 real unequal
(different) roots

$\Delta = 0$
1 real root or
2 equal roots

$\Delta < 0$
no real roots







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positive definite negative definite

The Discriminant $\Delta = b^2 - 4ac$

$0 > \nabla$	$0 = \nabla$	$0 < \nabla$

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