

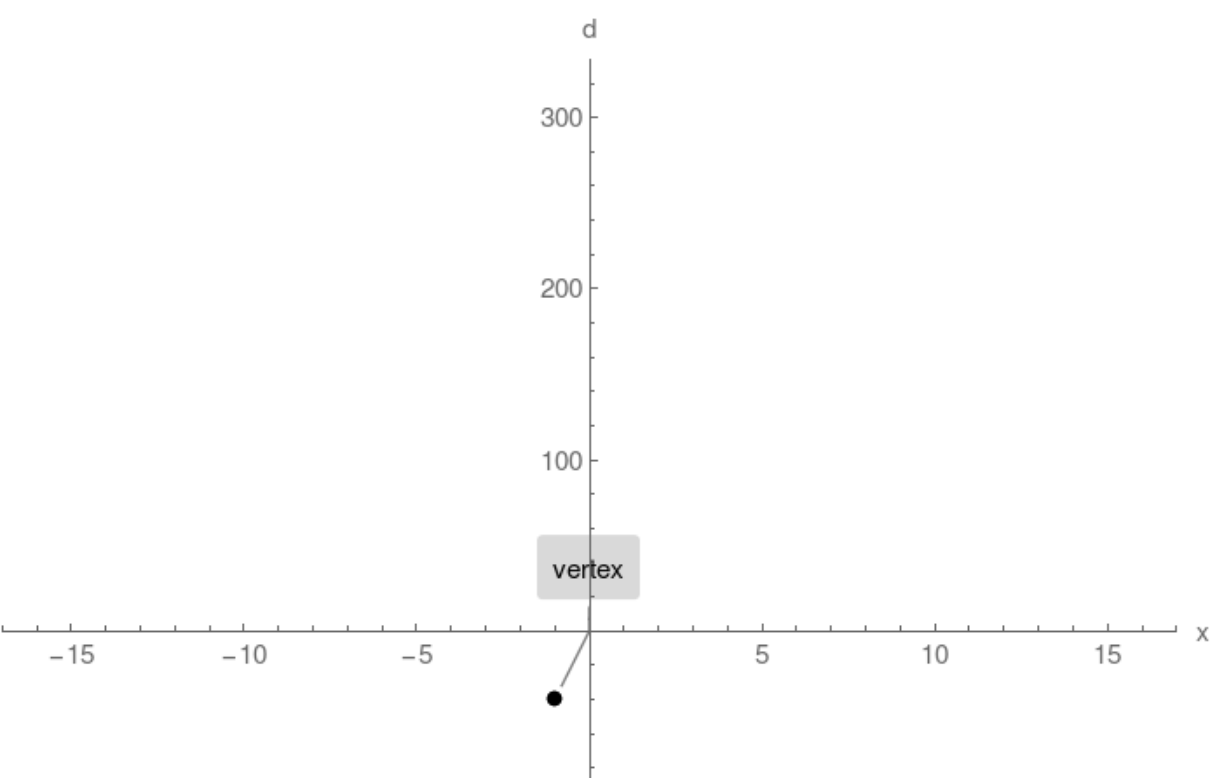
Example 1. 2 horizontal intercepts found

Plot $d(x) = x^2 + 2x - 39$

Step 1.

Compute vertex and plot single point:

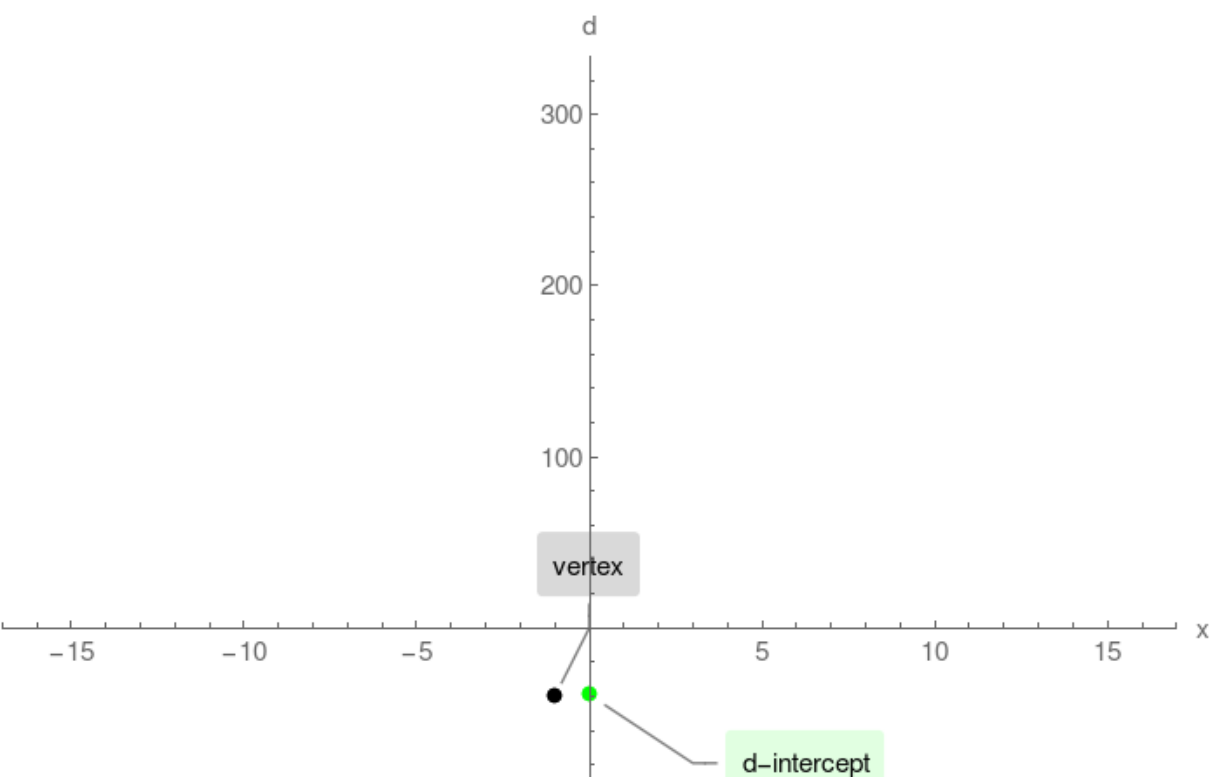
vertex = $(-1, -40)$



Step 2.

Compute d-intercept and plot single point:

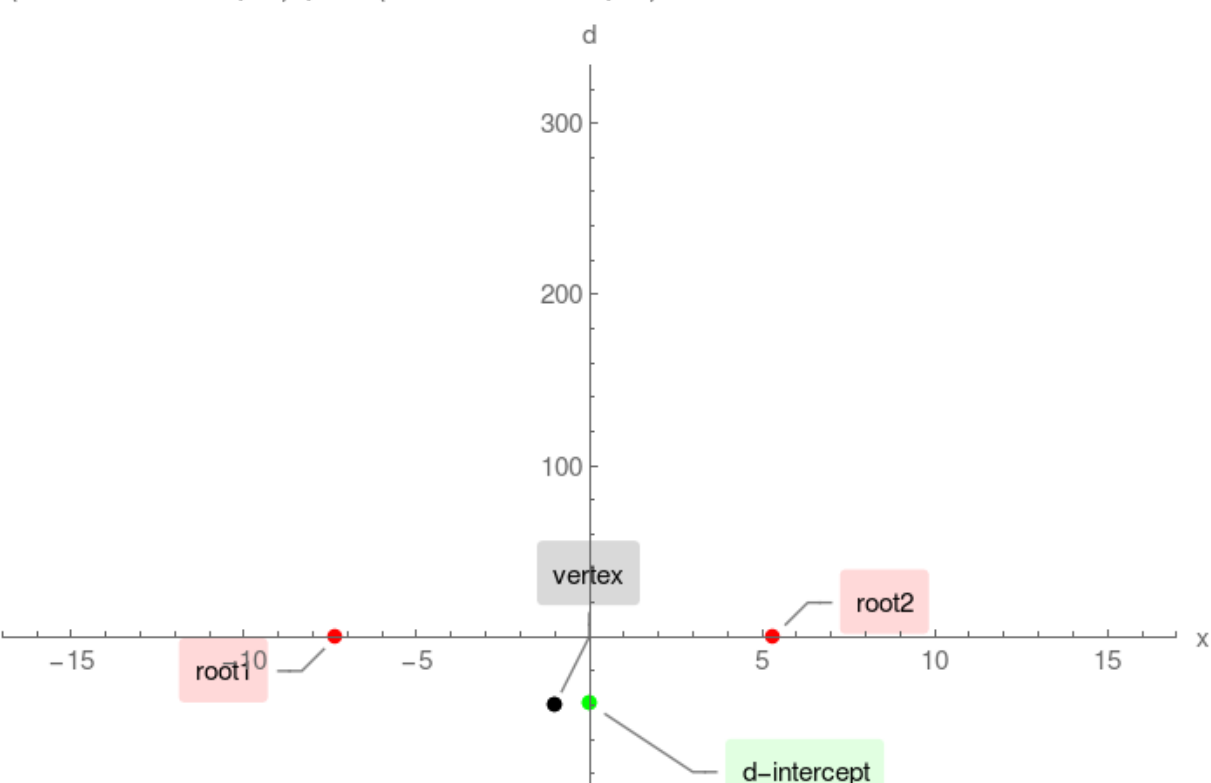
d-intercept = $(0, -39)$



Step 3.

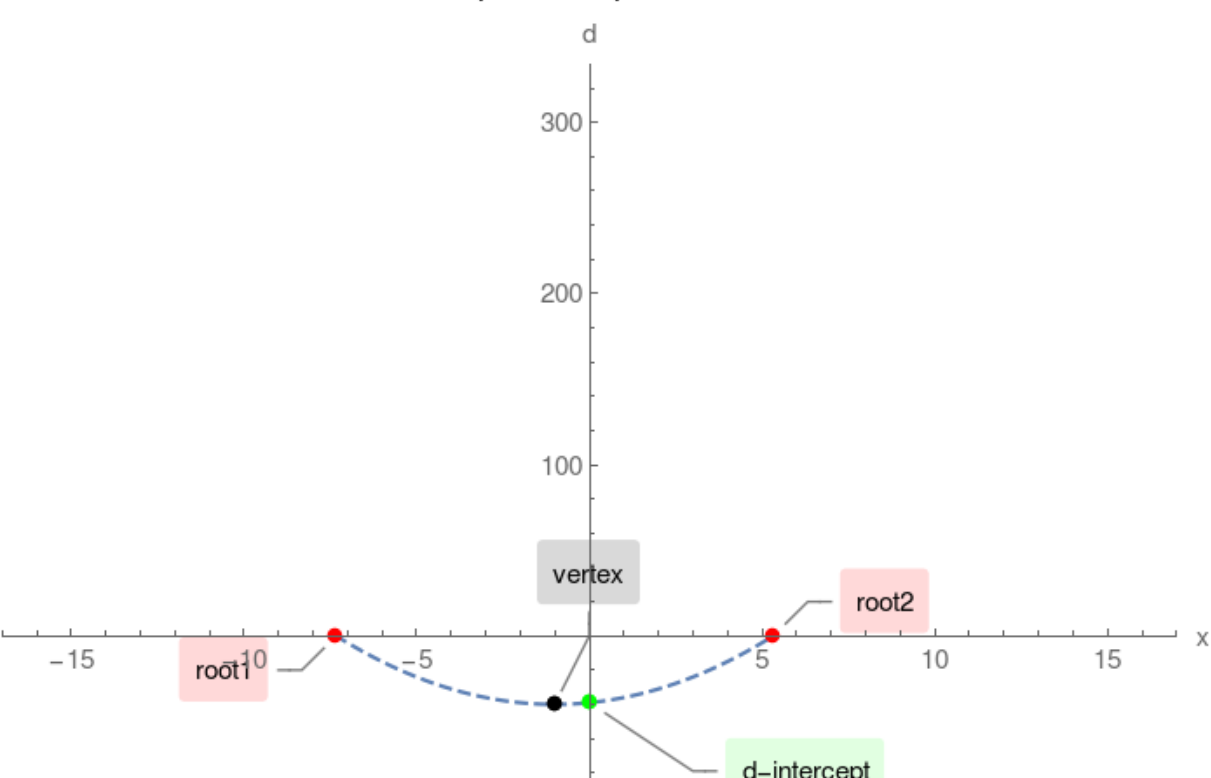
Compute x-intercepts by solving $x^2 + 2x - 39 = 0$:

$(-1 - 2\sqrt{10}, 0)$, $(-1 + 2\sqrt{10}, 0)$



Step 4.

connect the above computed points:



Step 5.

Extend the parabola beyond the range of intercepts

