

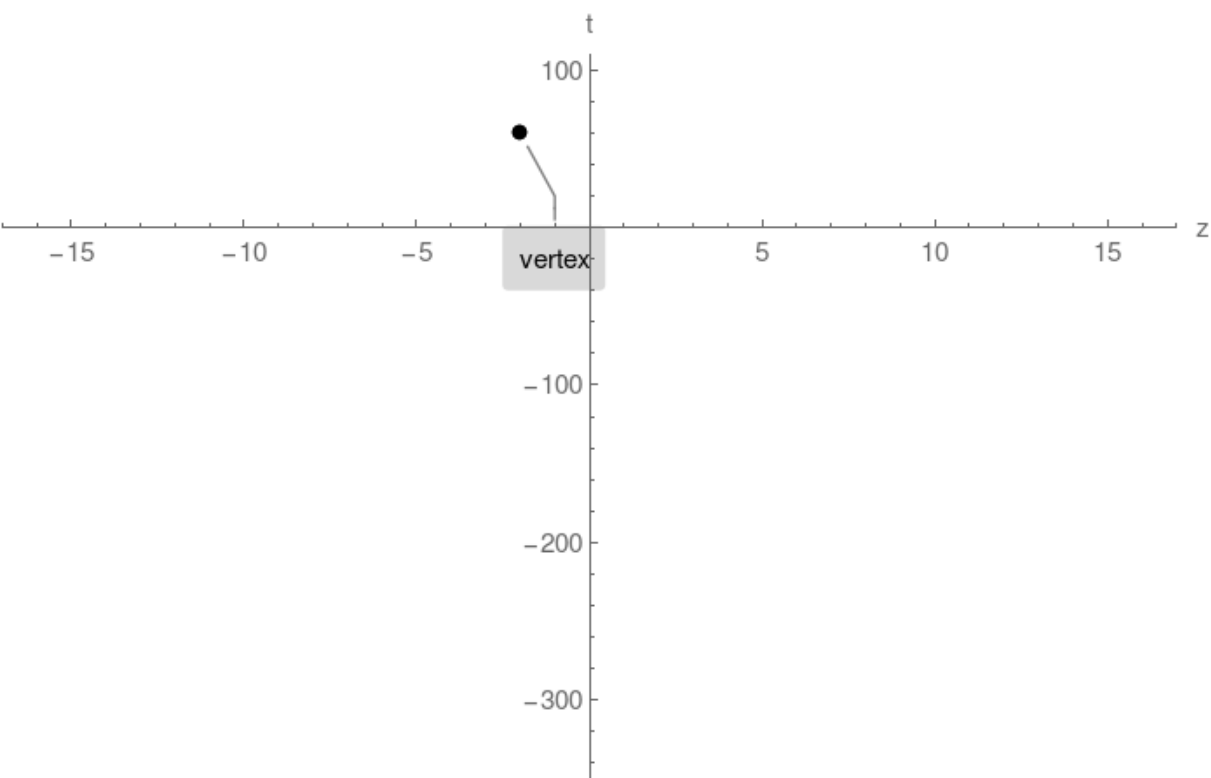
Example 1. 2 horizontal intercepts found

Plot $t(z) = -z^2 - 4z + 56$

Step 1.

Compute vertex and plot single point:

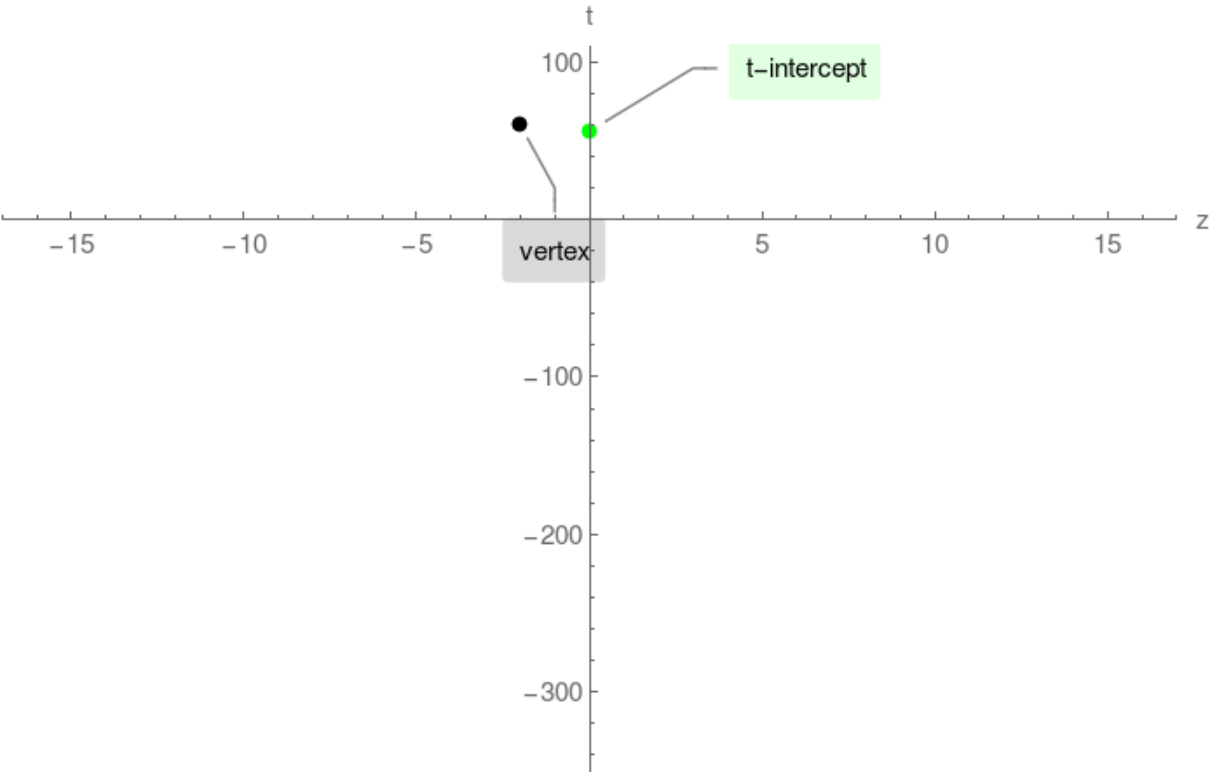
vertex = $(-2, 60)$



Step 2.

Compute t-intercept and plot single point:

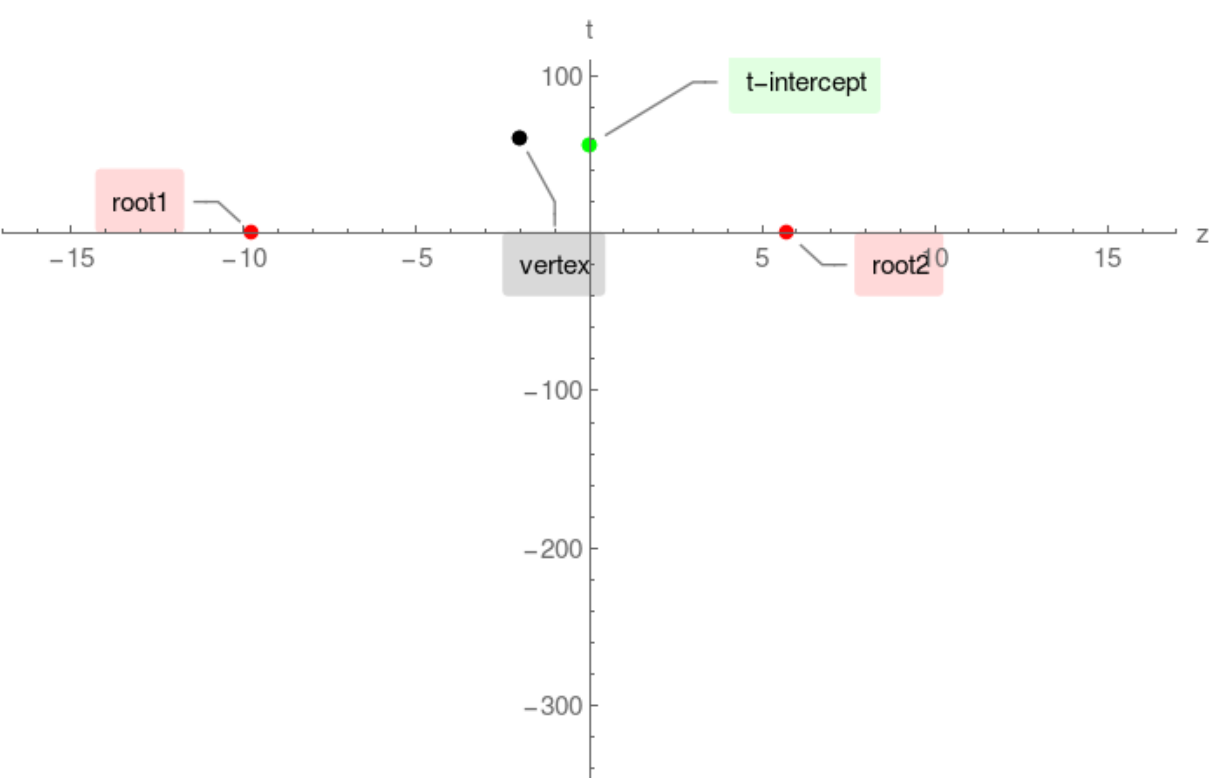
t-intercept = $(0, 56)$



Step 3.

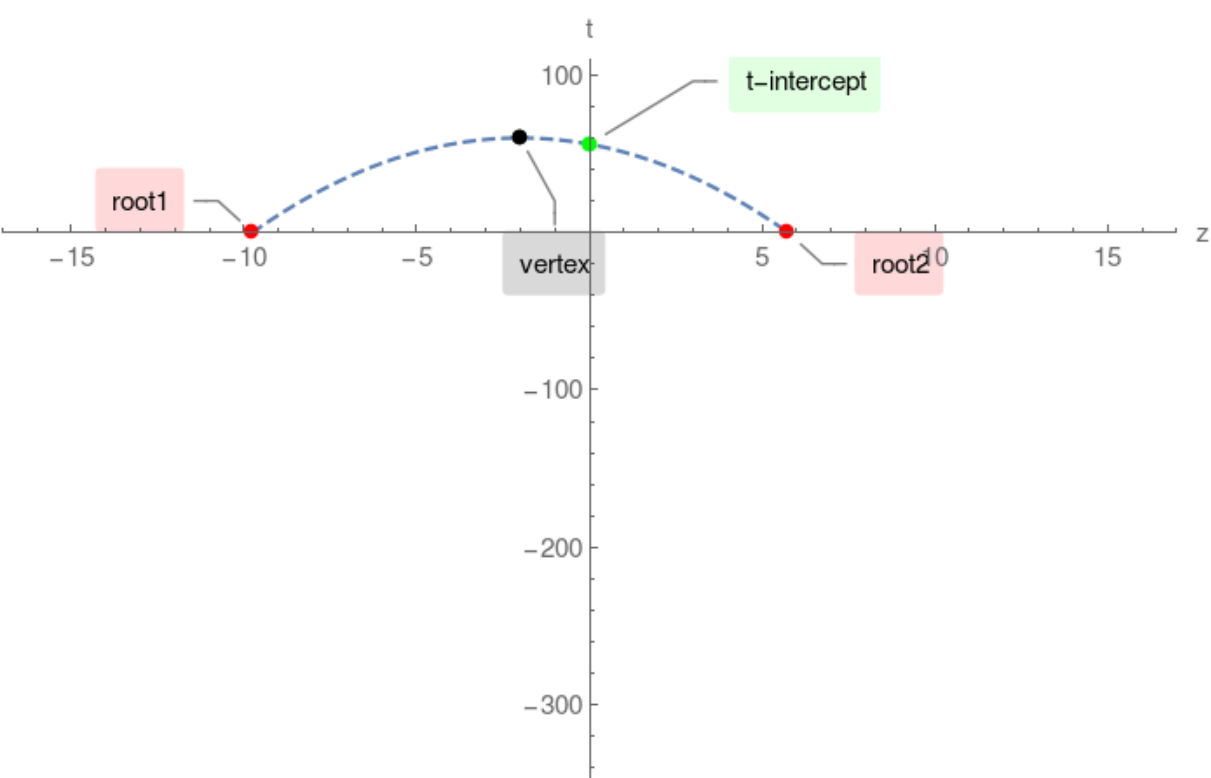
Compute z-intercepts by solving $-z^2 - 4z + 56 = 0$:

$(-2 - 2\sqrt{15}, 0)$, $(-2 + 2\sqrt{15}, 0)$



Step 4.

connect the above computed points:



Step 5.

Extend the parabola beyond the range of intercepts

