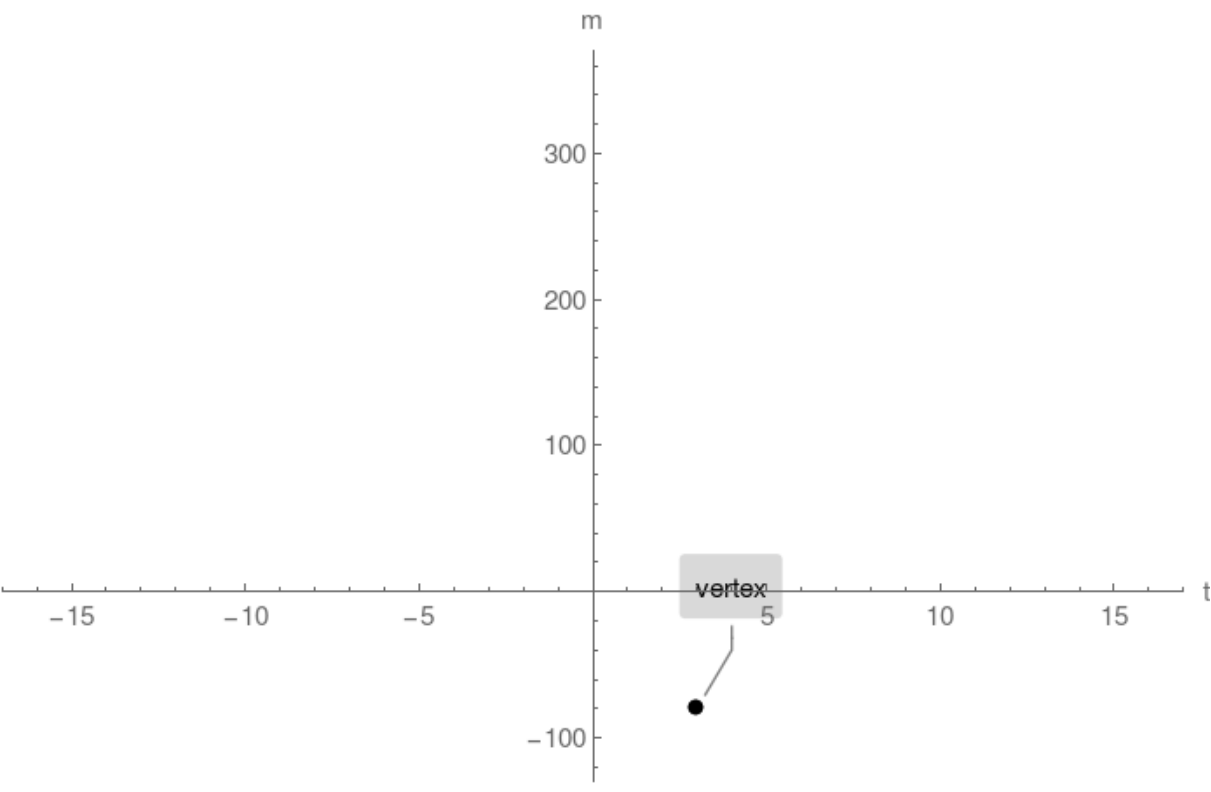
Example 1. 2 horizontal intercepts found

Plot $m(t)=t^2-6t-71$

Step 1.

Compute vertex and plot single point:

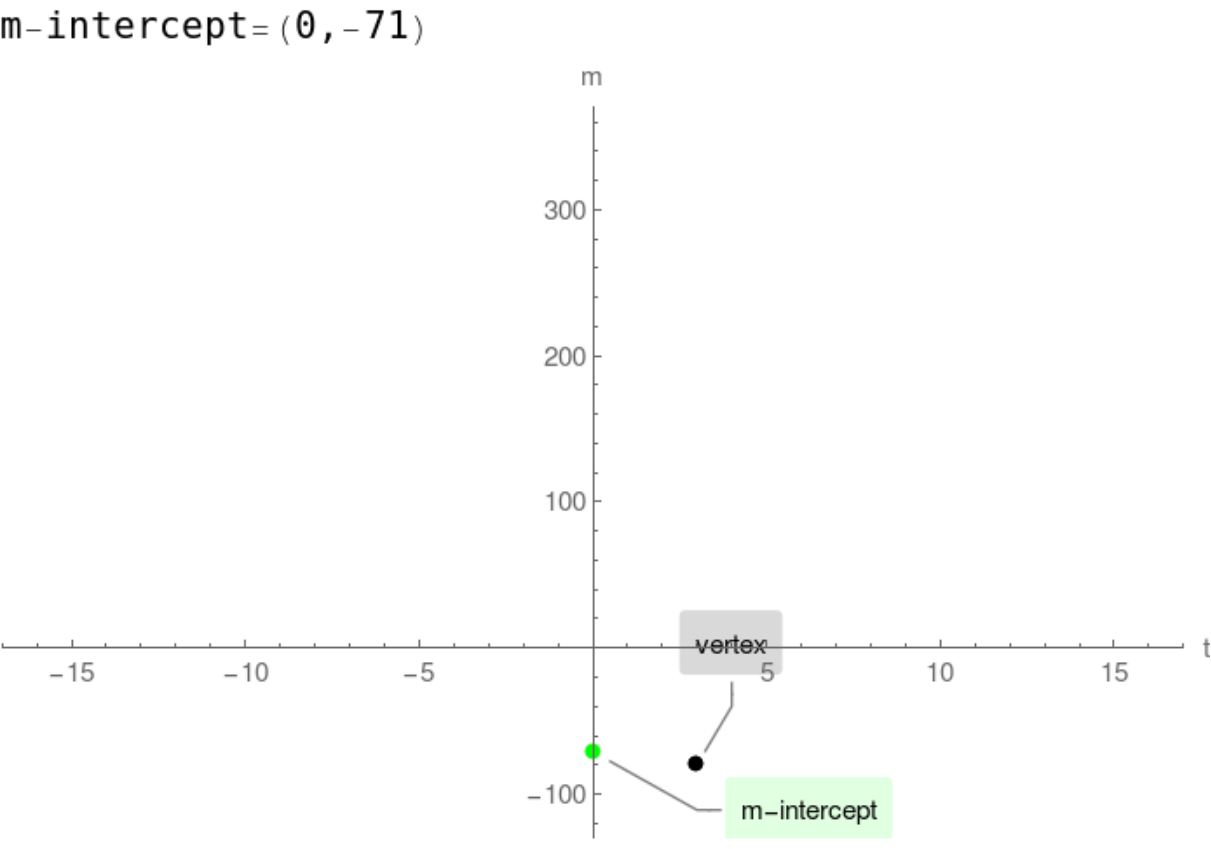
vertex$=(3,-80)$



Step 2.

Compute m-intercept and plot single point:

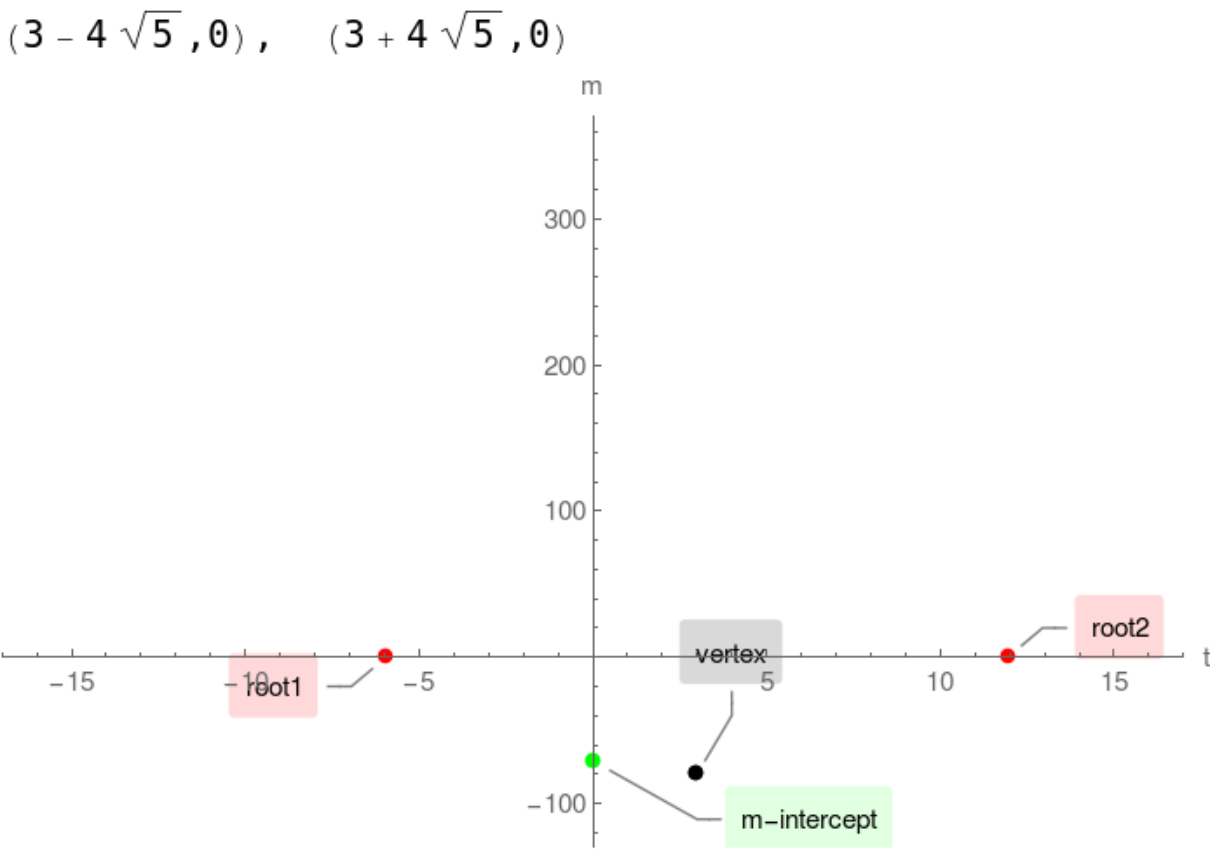
m-intercept$=(0,-71)$



Step 3.

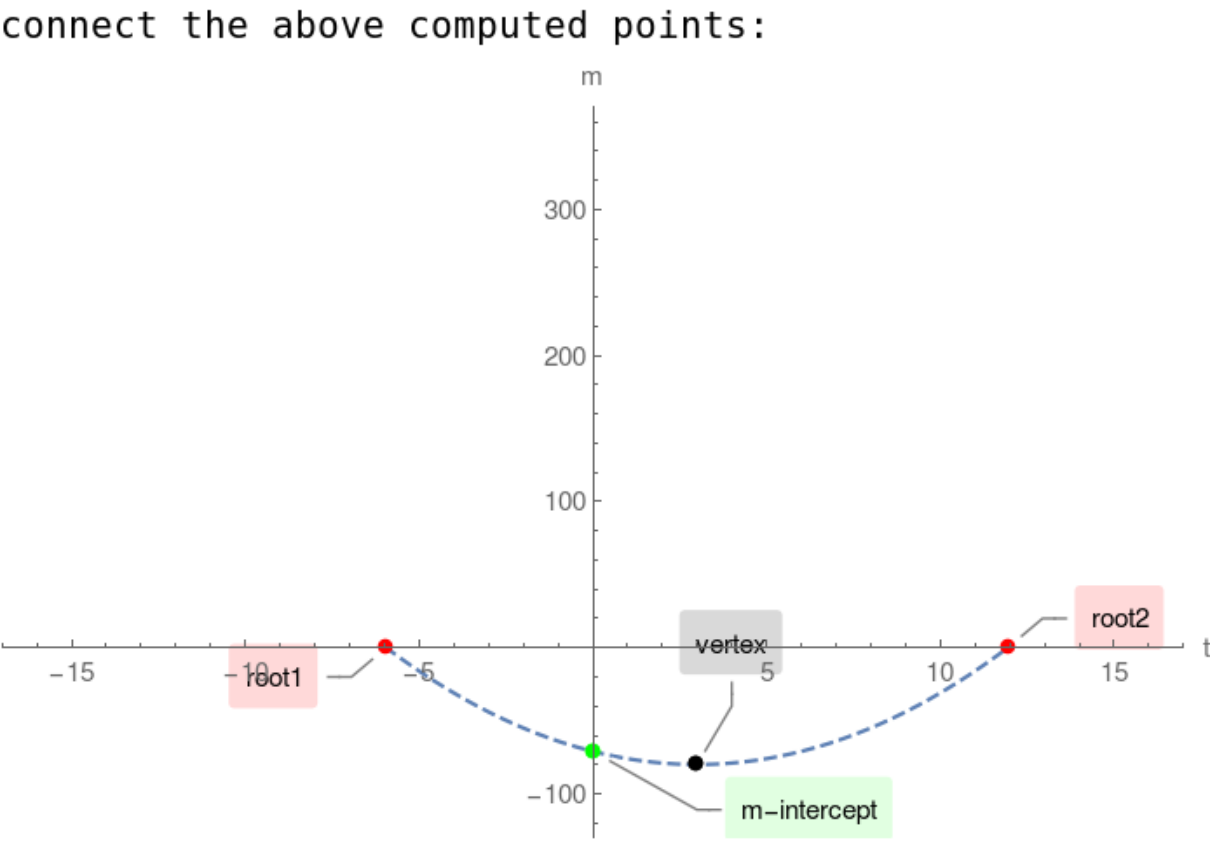
Compute t-intercepts by solving $t^2-6t-71=0$:

$(3-4\sqrt{5},0)$, $(3+4\sqrt{5},0)$



Step 4.

connect the above computed points:



Step 5.

Extend the parabola beyond the range of intercepts