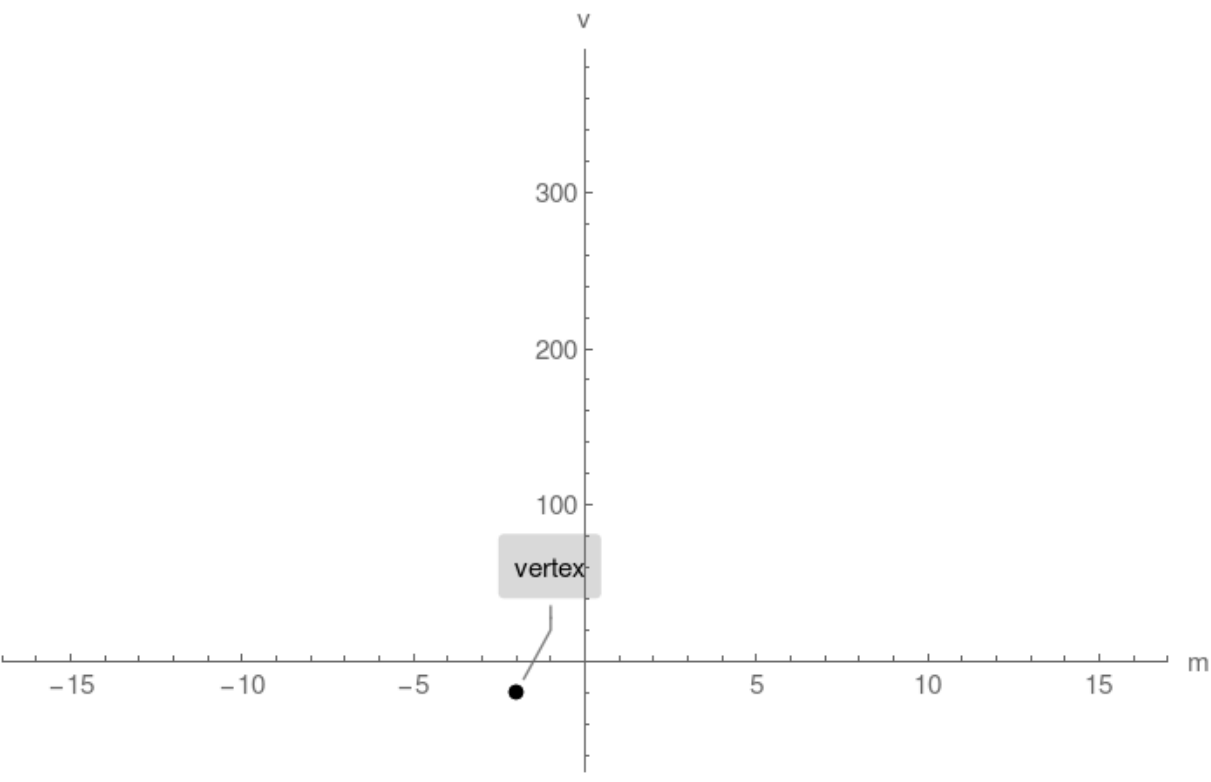
Example 1. 2 horizontal intercepts found

Plot $v(m) = m^2 + 4m - 16$

Step 1.

Compute vertex and plot single point:

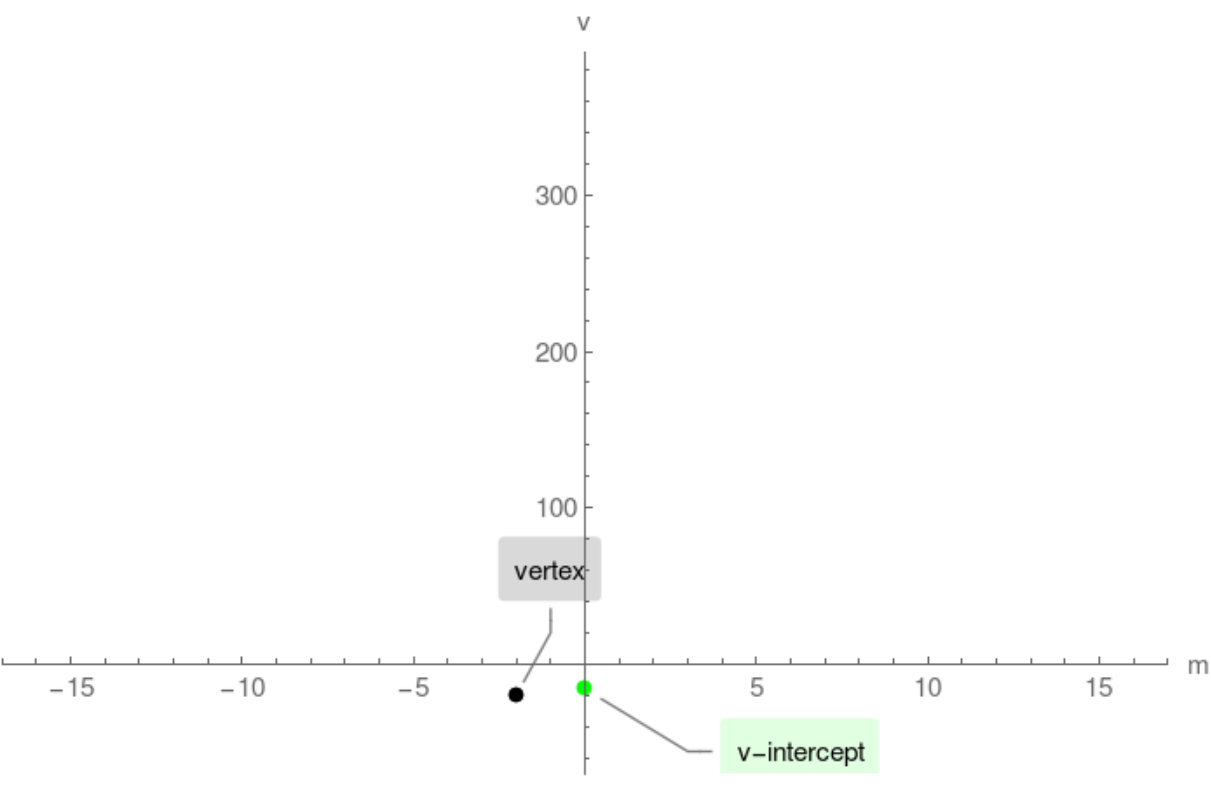
vertex $= (-2, -20)$



Step 2.

Compute v-intercept and plot single point:

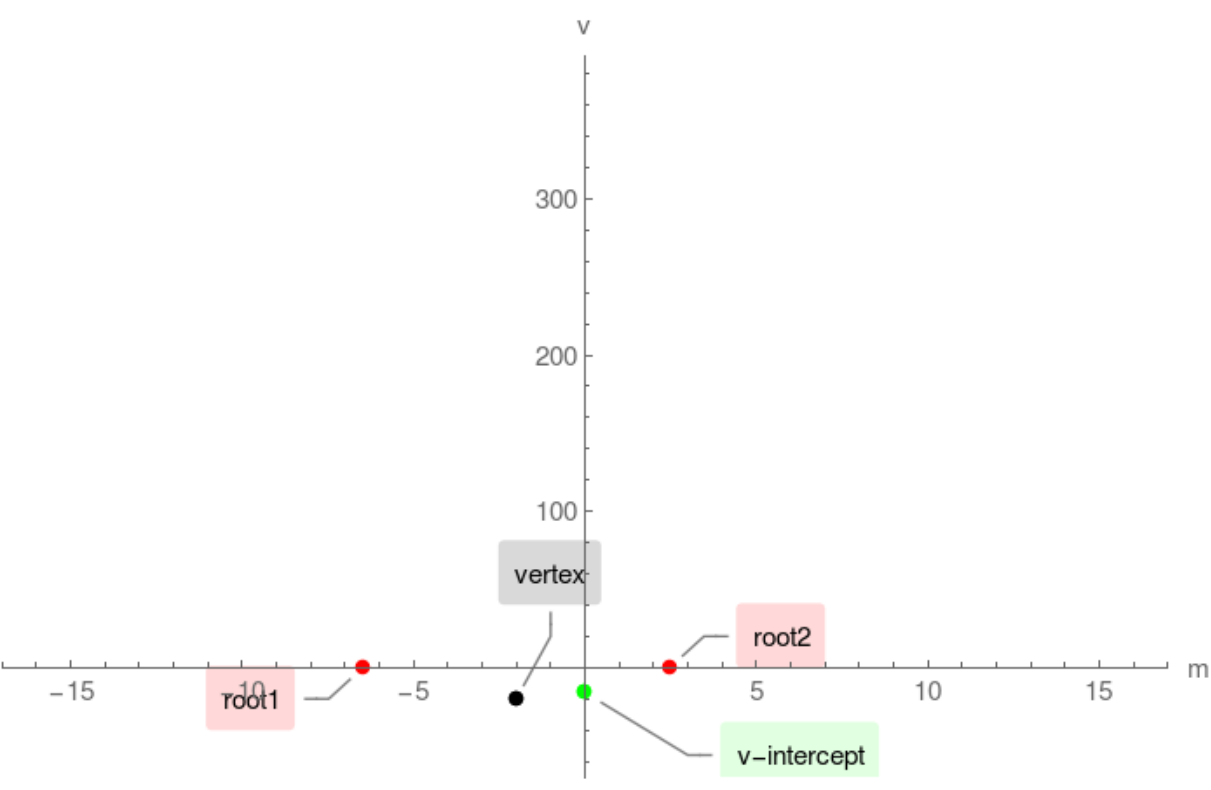
v-intercept $= (0, -16)$



Step 3.

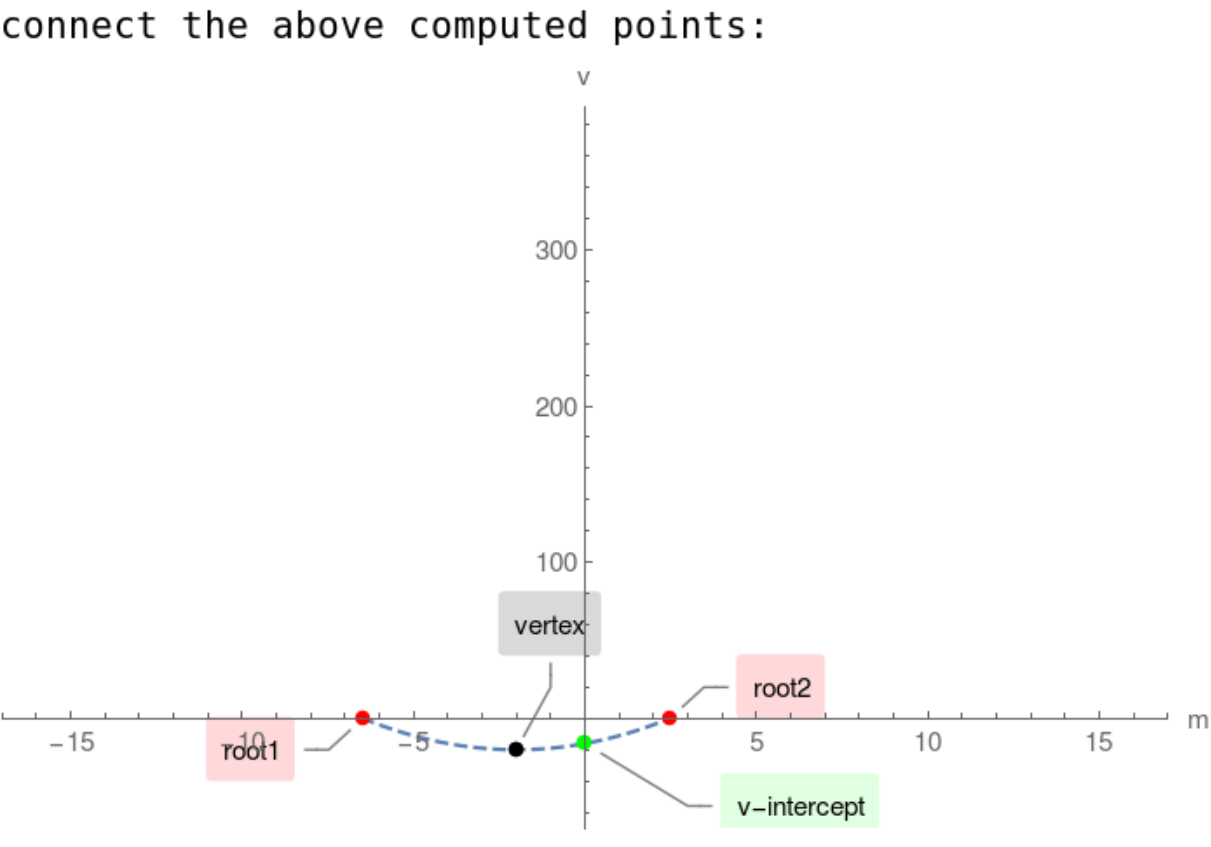
Compute m-intercepts by solving $m^2 + 4m - 16 = 0$:

$(-2 - 2\sqrt{5}, 0)$, $(-2 + 2\sqrt{5}, 0)$



Step 4.

connect the above computed points:



Step 5.

Extend the parabola beyond the range of intercepts