

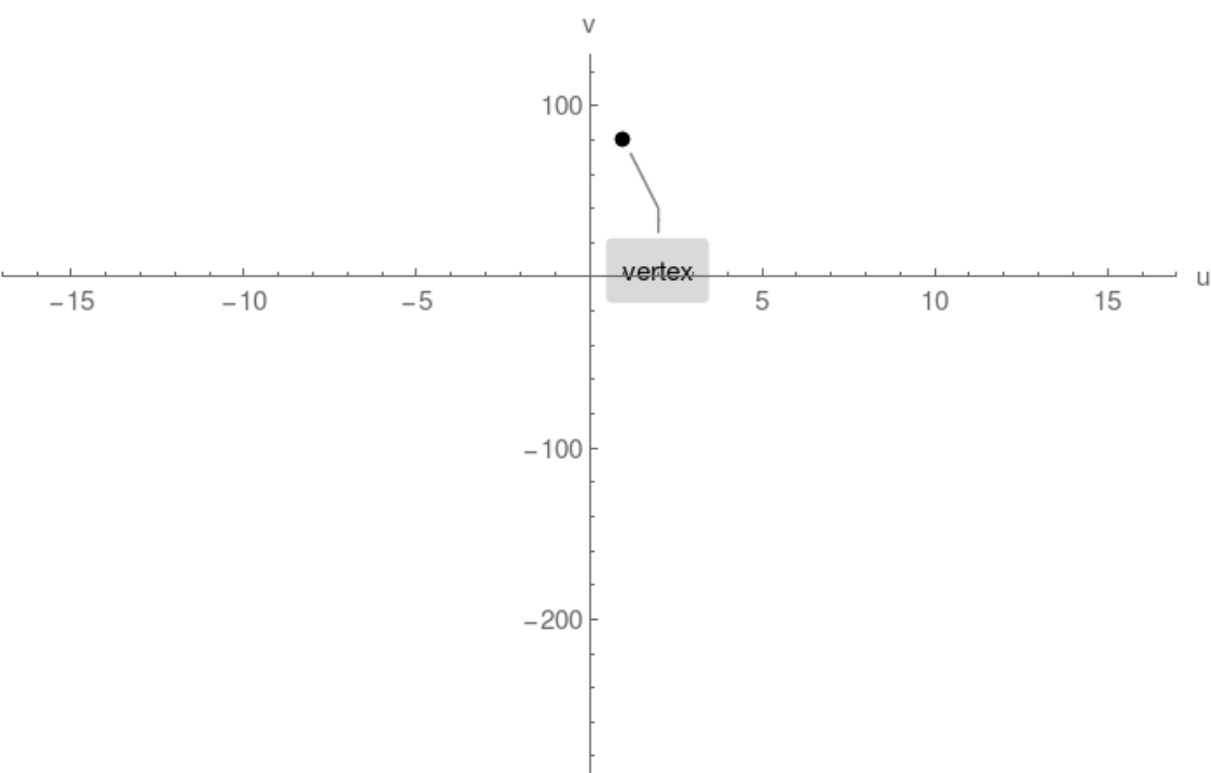
Example 1. 2 horizontal intercepts found

Plot $v(u) = -u^2 + 2u + 79$

Step 1.

Compute vertex and plot single point:

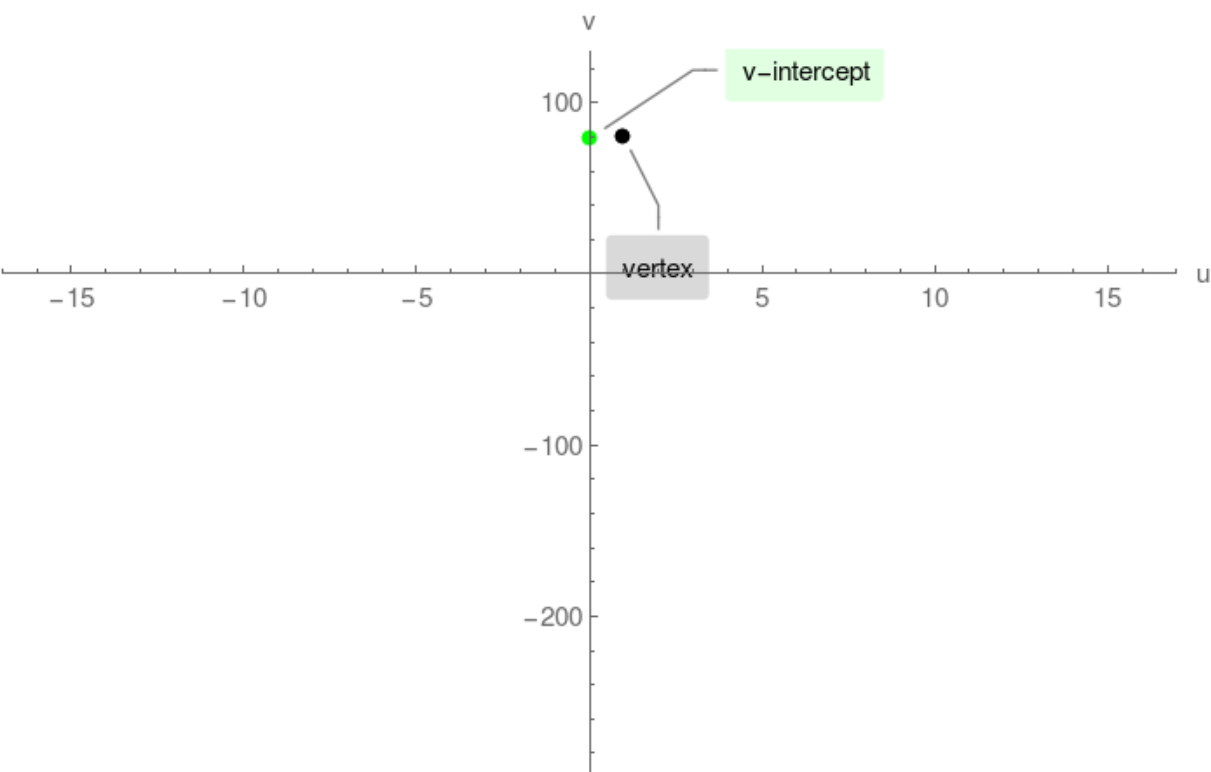
vertex = (1, 80)



Step 2.

Compute v-intercept and plot single point:

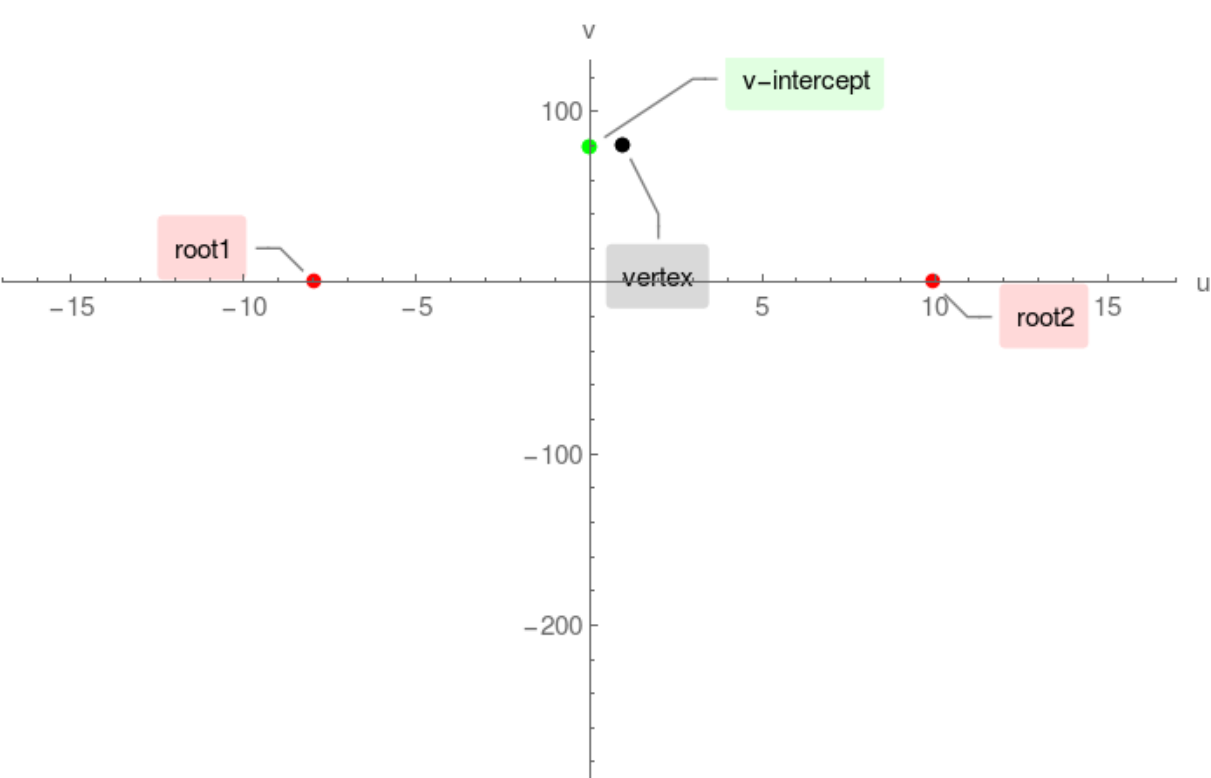
v-intercept = (0, 79)



Step 3.

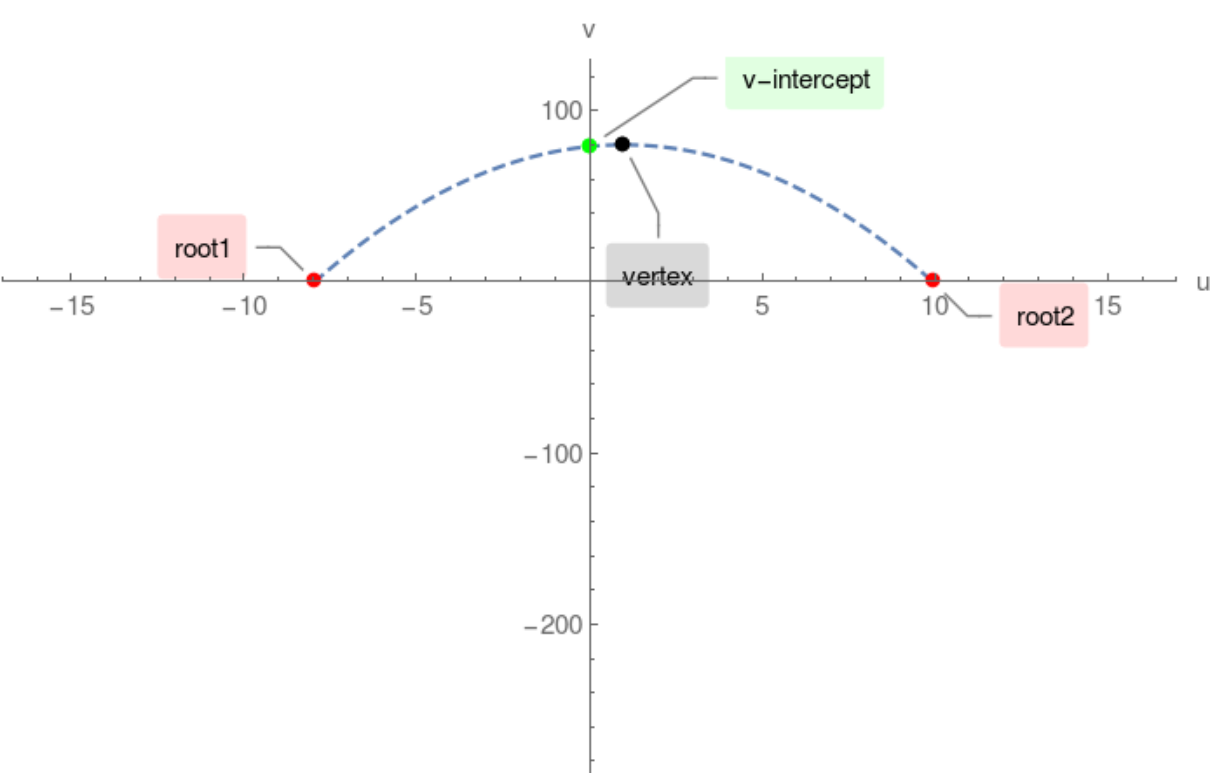
Compute u-intercepts by solving $-u^2 + 2u + 79 = 0$:

$(1 - 4\sqrt{5}, 0)$, $(1 + 4\sqrt{5}, 0)$



Step 4.

connect the above computed points:



Step 5.

Extend the parabola beyond the range of intercepts

