

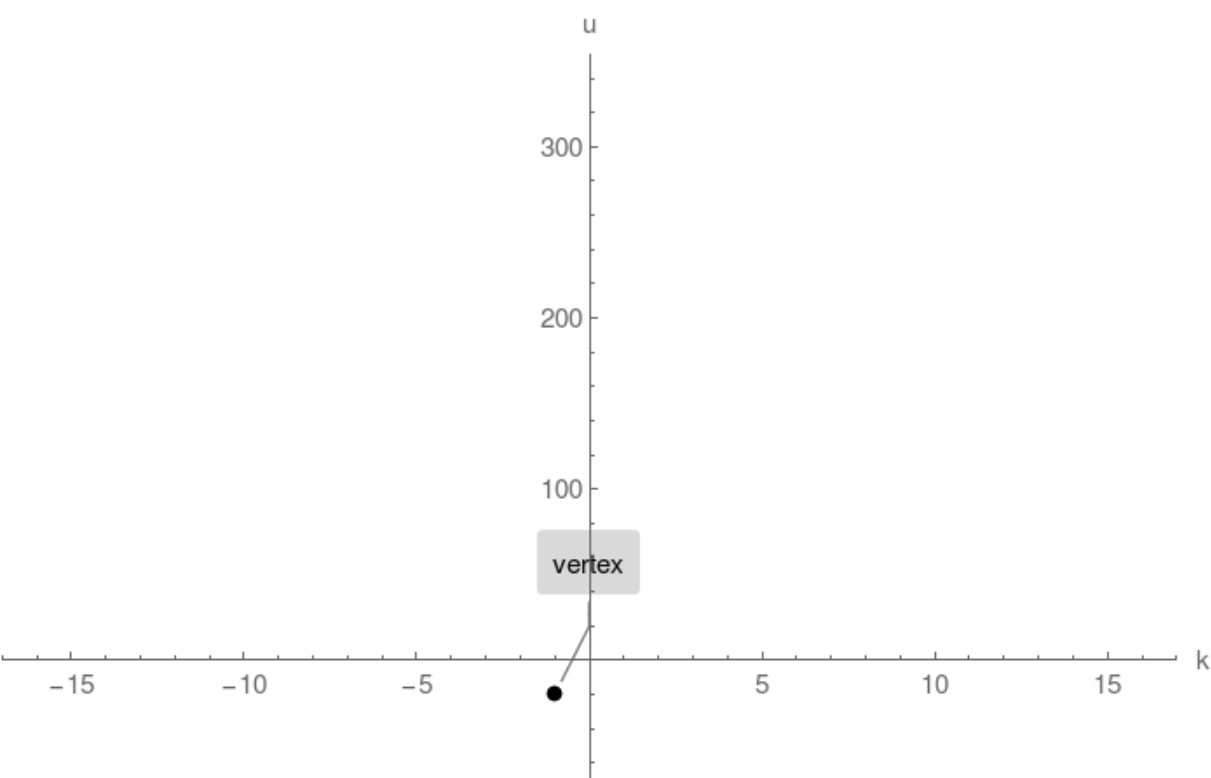
Example 1. 2 horizontal intercepts found

Plot $u(k) = k^2 + 2k - 19$

Step 1.

Compute vertex and plot single point:

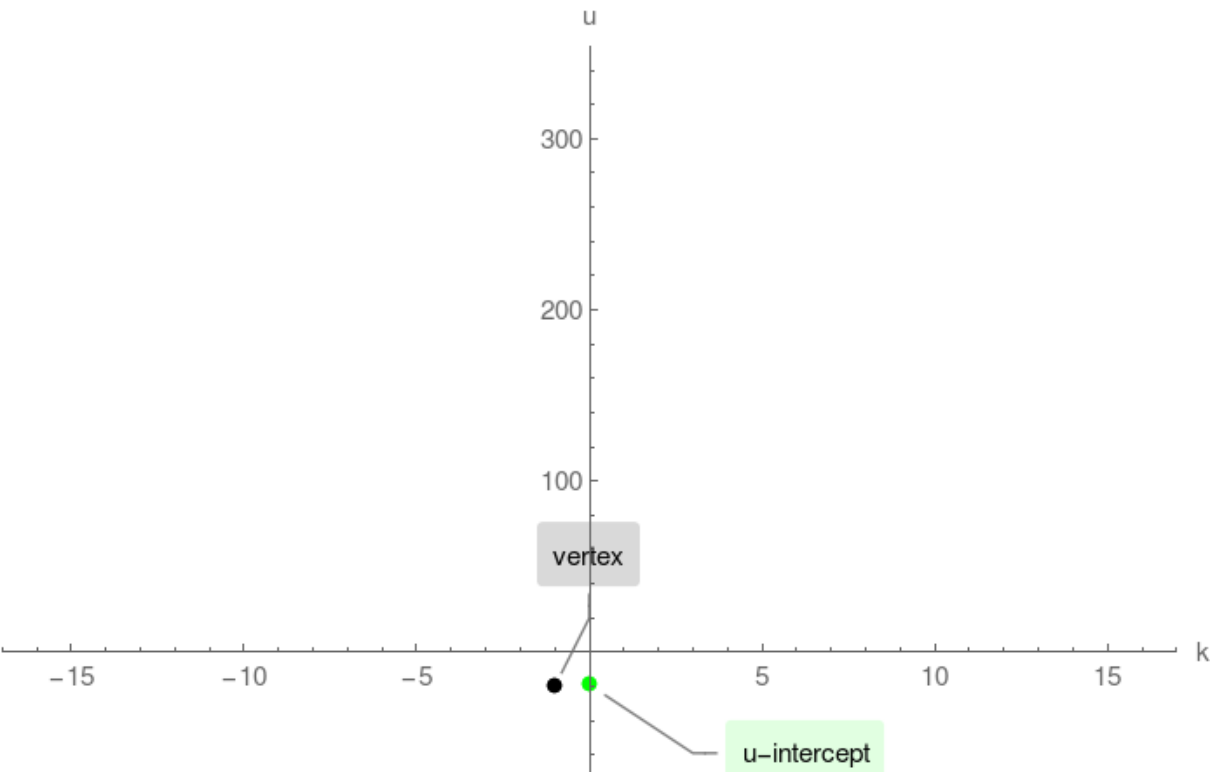
vertex = $(-1, -20)$



Step 2.

Compute u-intercept and plot single point:

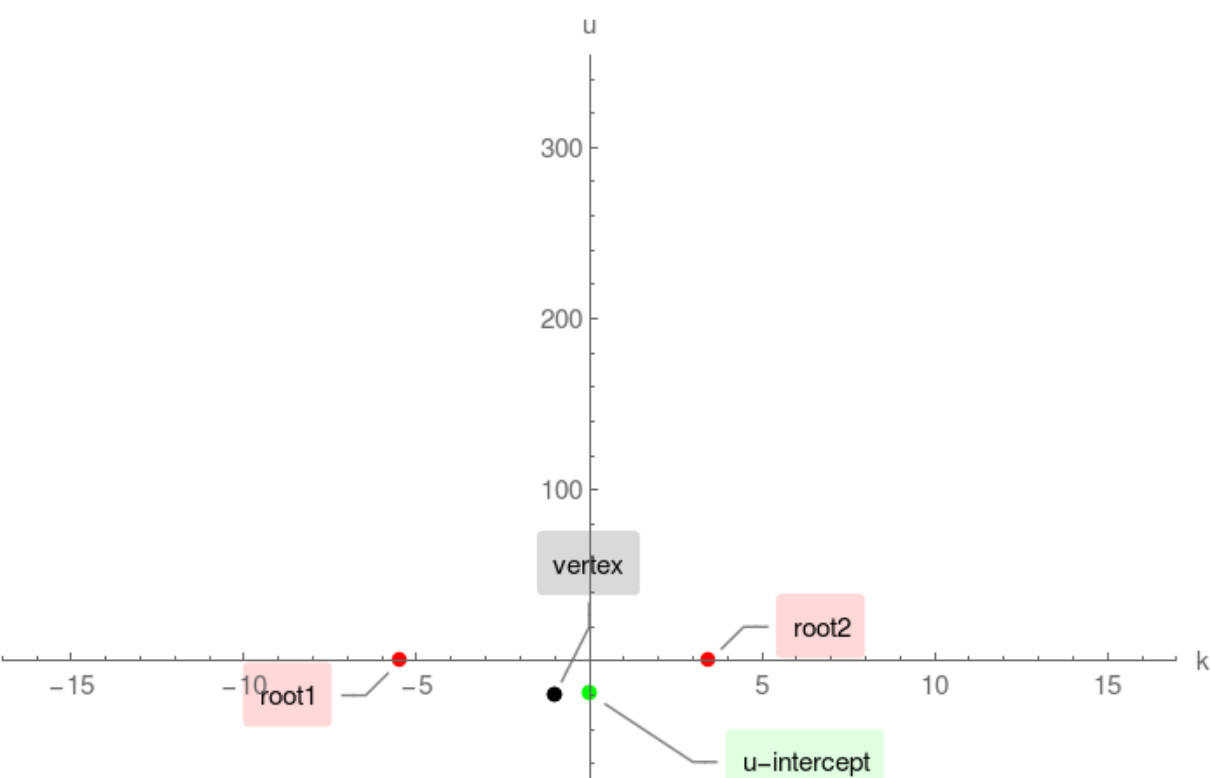
u-intercept = $(0, -19)$



Step 3.

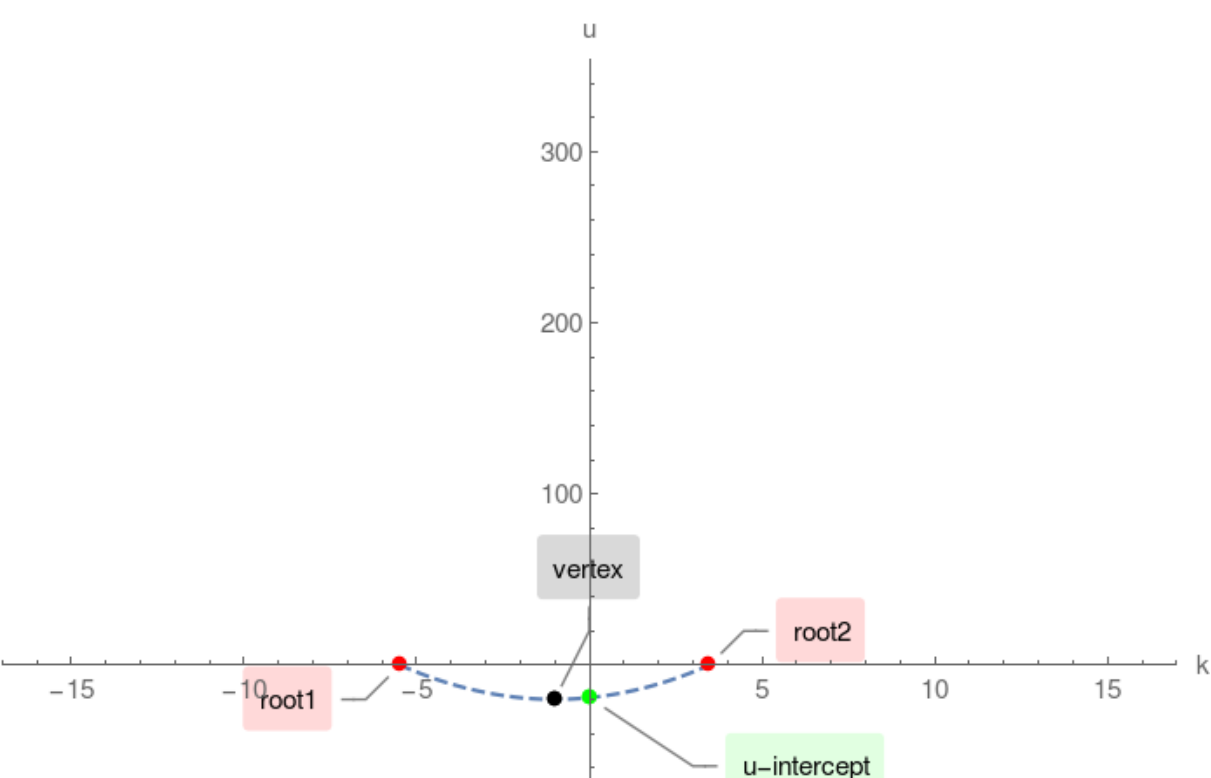
Compute k-intercepts by solving $k^2 + 2k - 19 = 0$:

$(-1 - 2\sqrt{5}, 0)$, $(-1 + 2\sqrt{5}, 0)$



Step 4.

connect the above computed points:



Step 5.

Extend the parabola beyond the range of intercepts

