

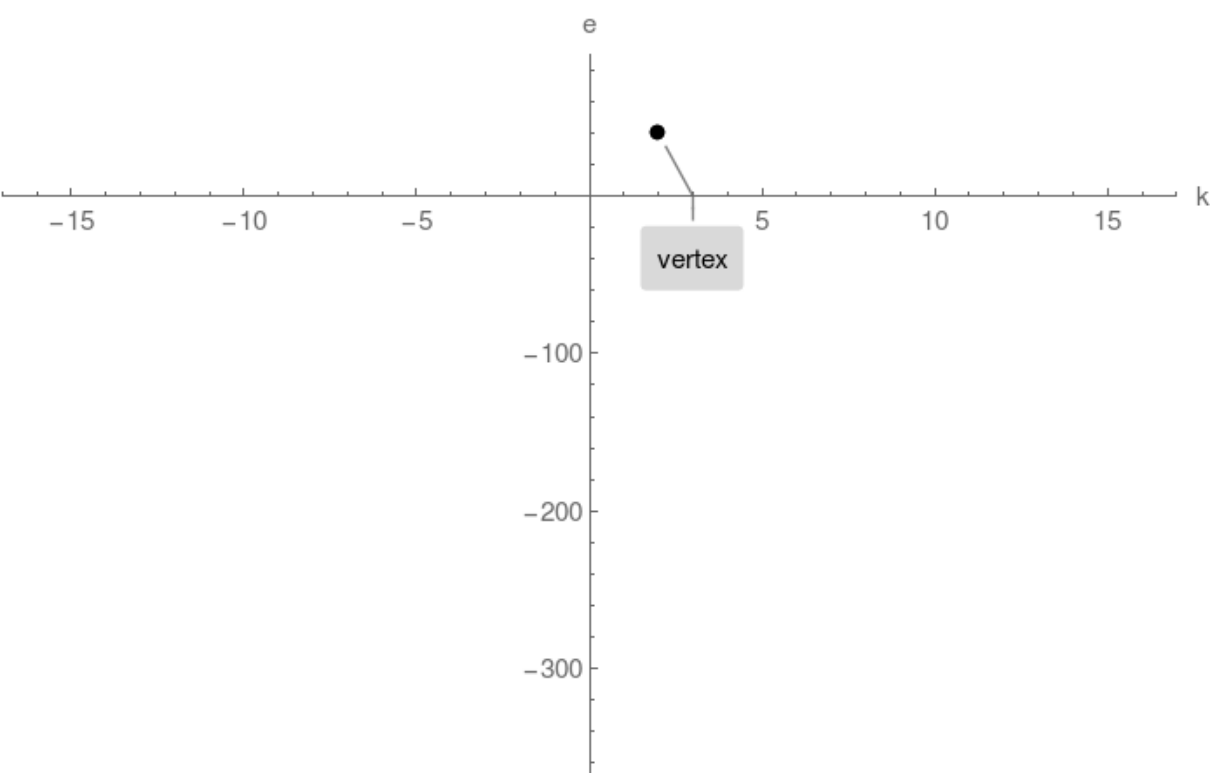
Example 1. 2 horizontal intercepts found

Plot $e(k) = -k^2 + 4k + 36$

Step 1.

Compute vertex and plot single point:

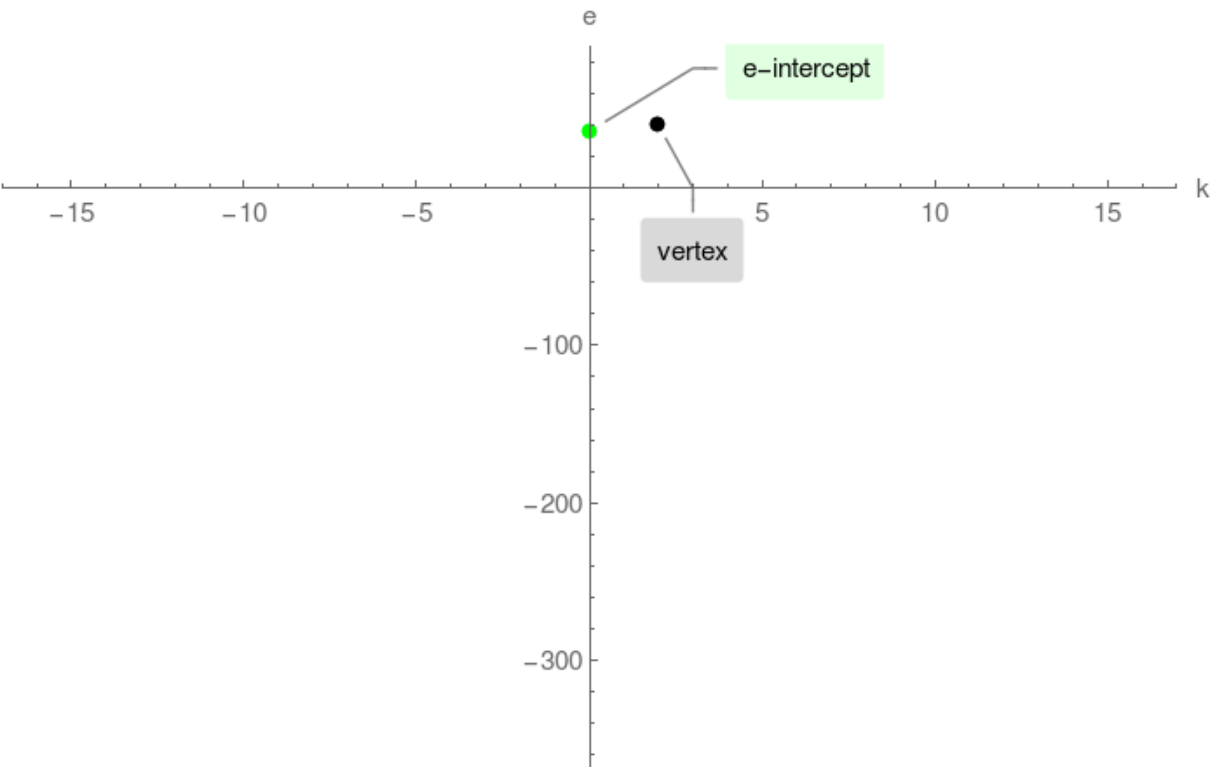
vertex = $(2, 40)$



Step 2.

Compute e-intercept and plot single point:

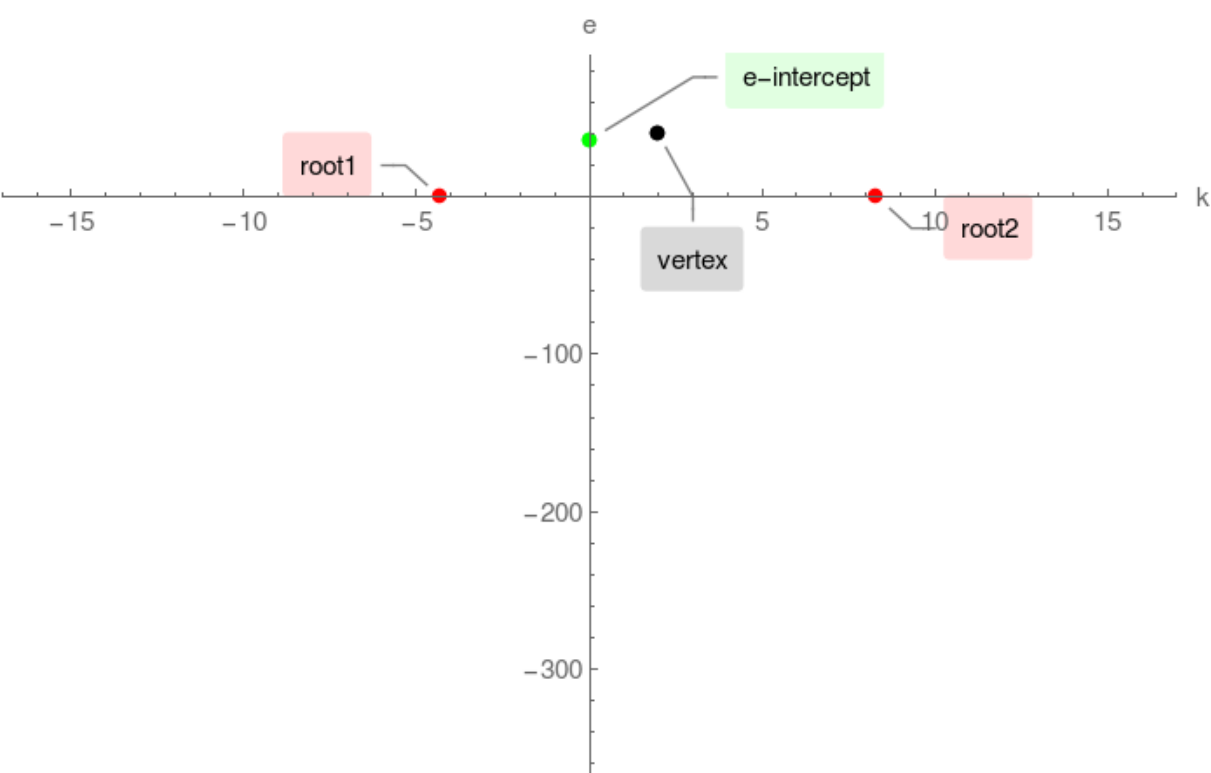
e-intercept = $(0, 36)$



Step 3.

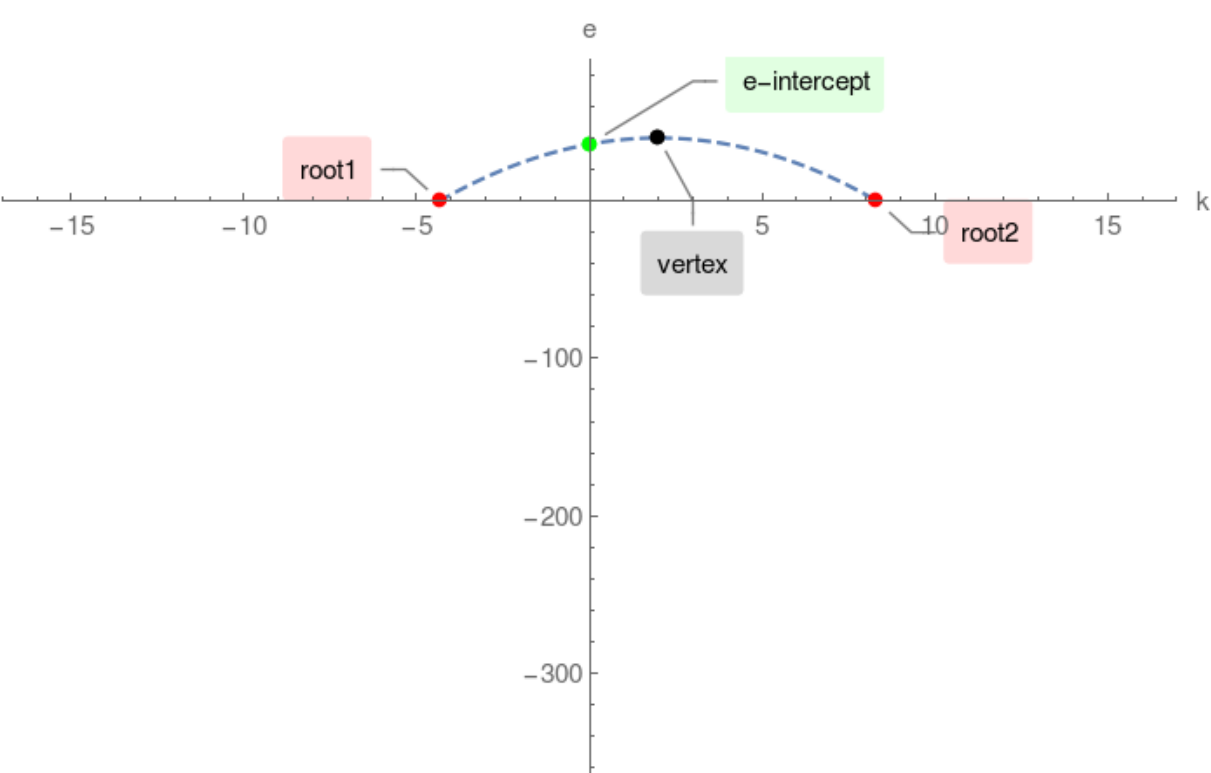
Compute k-intercepts by solving $-k^2 + 4k + 36 = 0$:

$(2 - 2\sqrt{10}, 0)$, $(2 + 2\sqrt{10}, 0)$



Step 4.

connect the above computed points:



Step 5.

Extend the parabola beyond the range of intercepts

