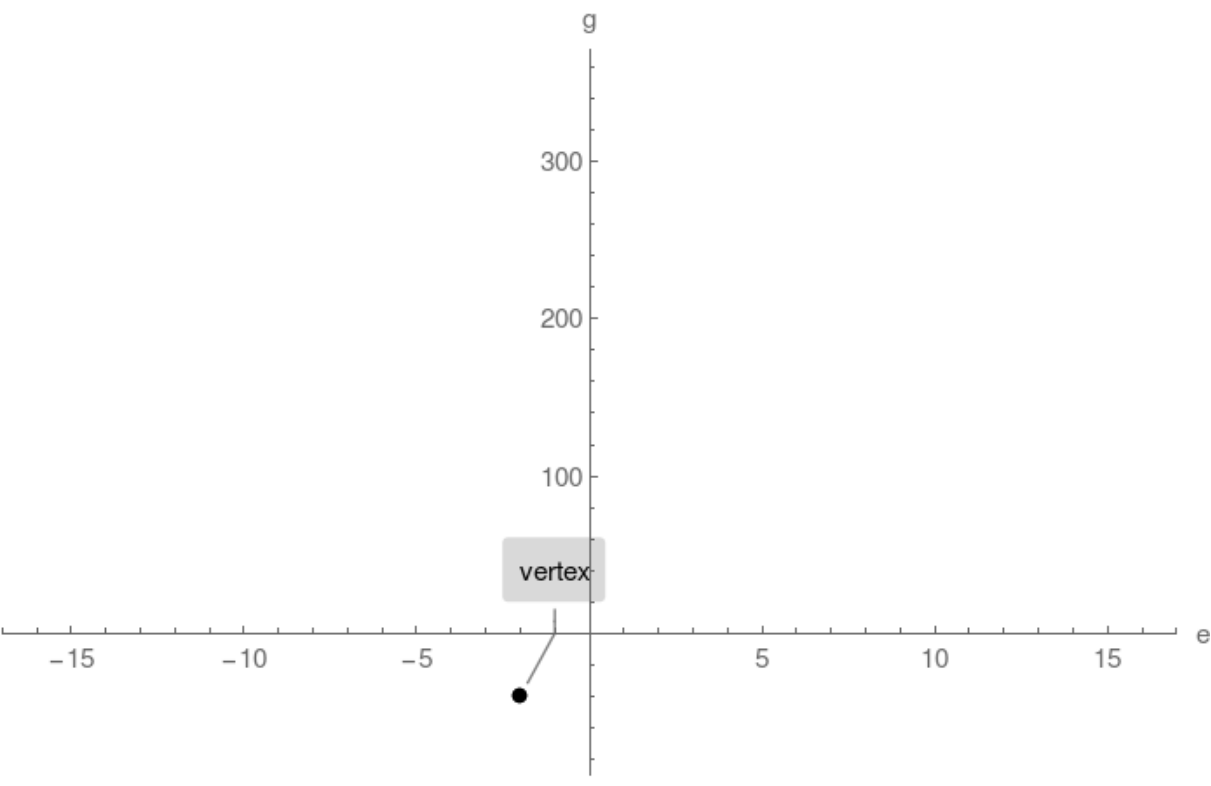
Example 1. 2 horizontal intercepts found

Plot $g(e) = e^2 + 4\,e - 36$

Step 1.

Compute vertex and plot single point:

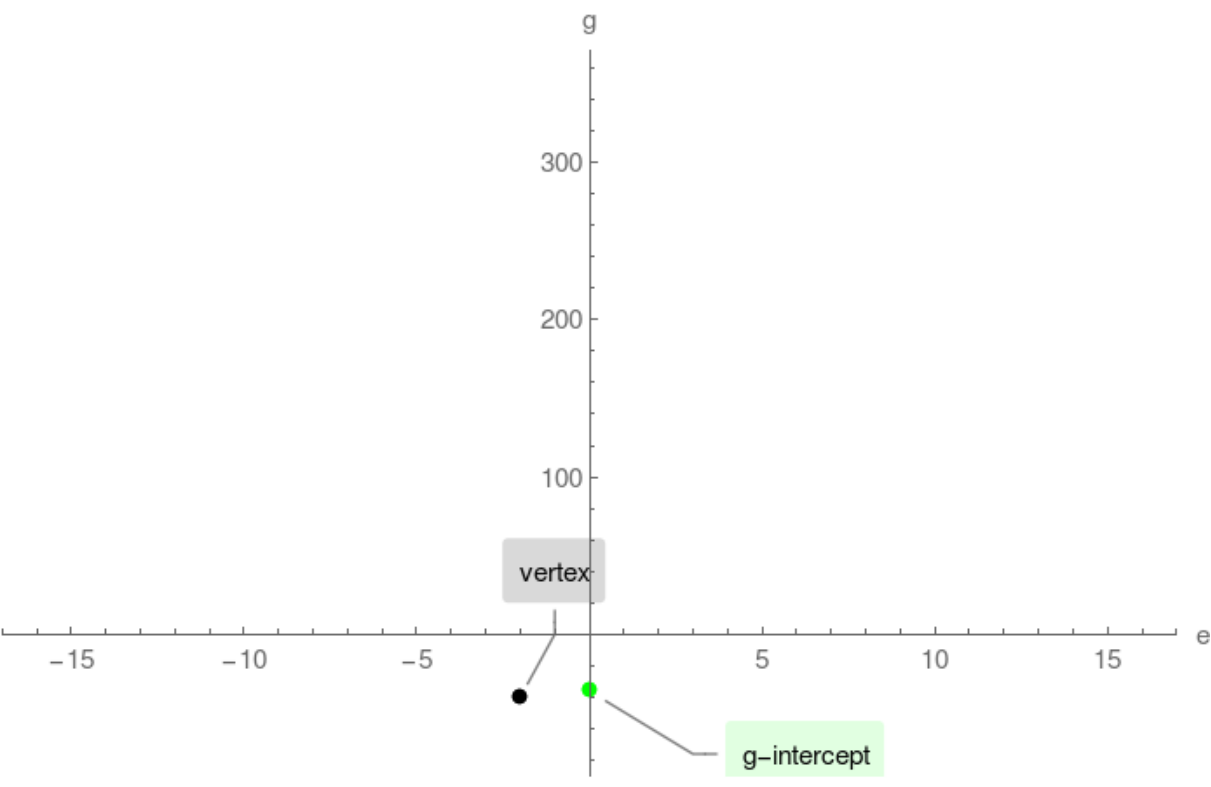
vertex $= (-2, -40)$



Step 2.

Compute g-intercept and plot single point:

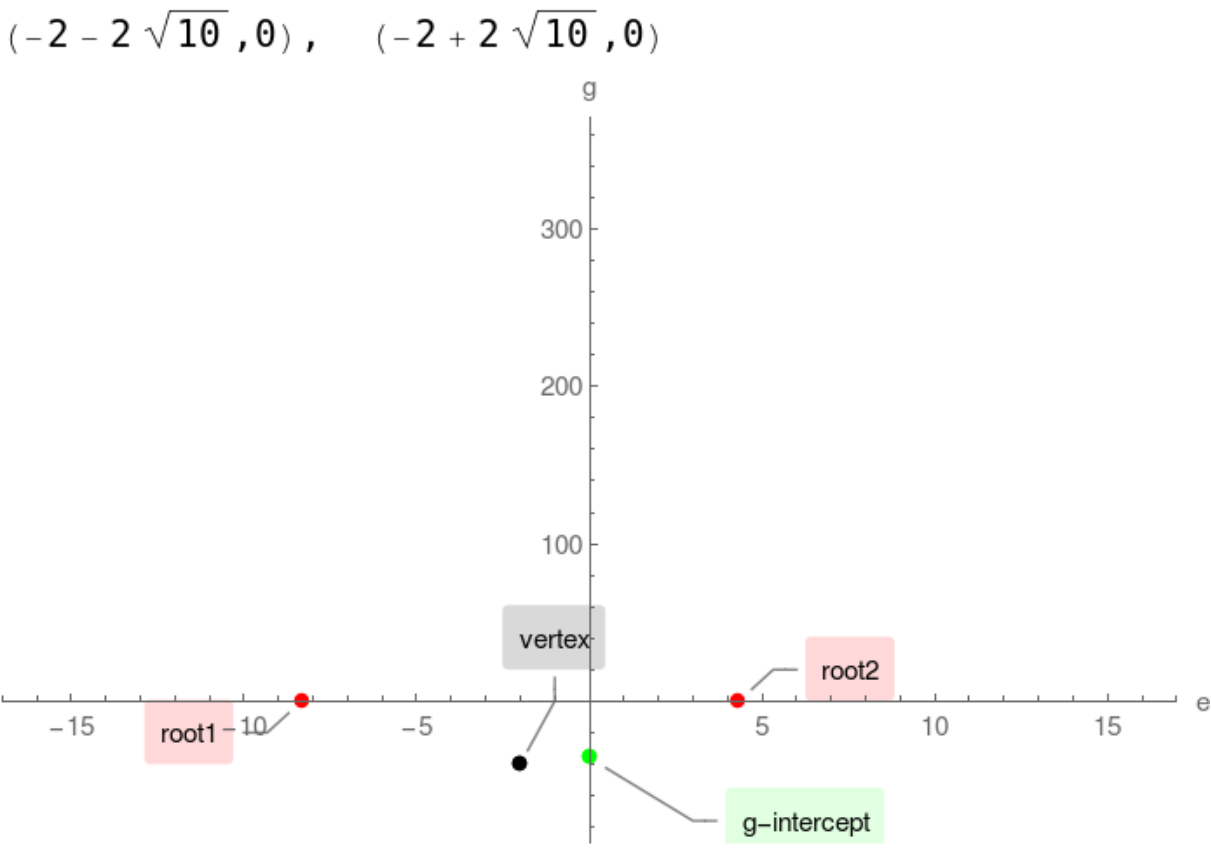
g-intercept $= (0, -36)$



Step 3.

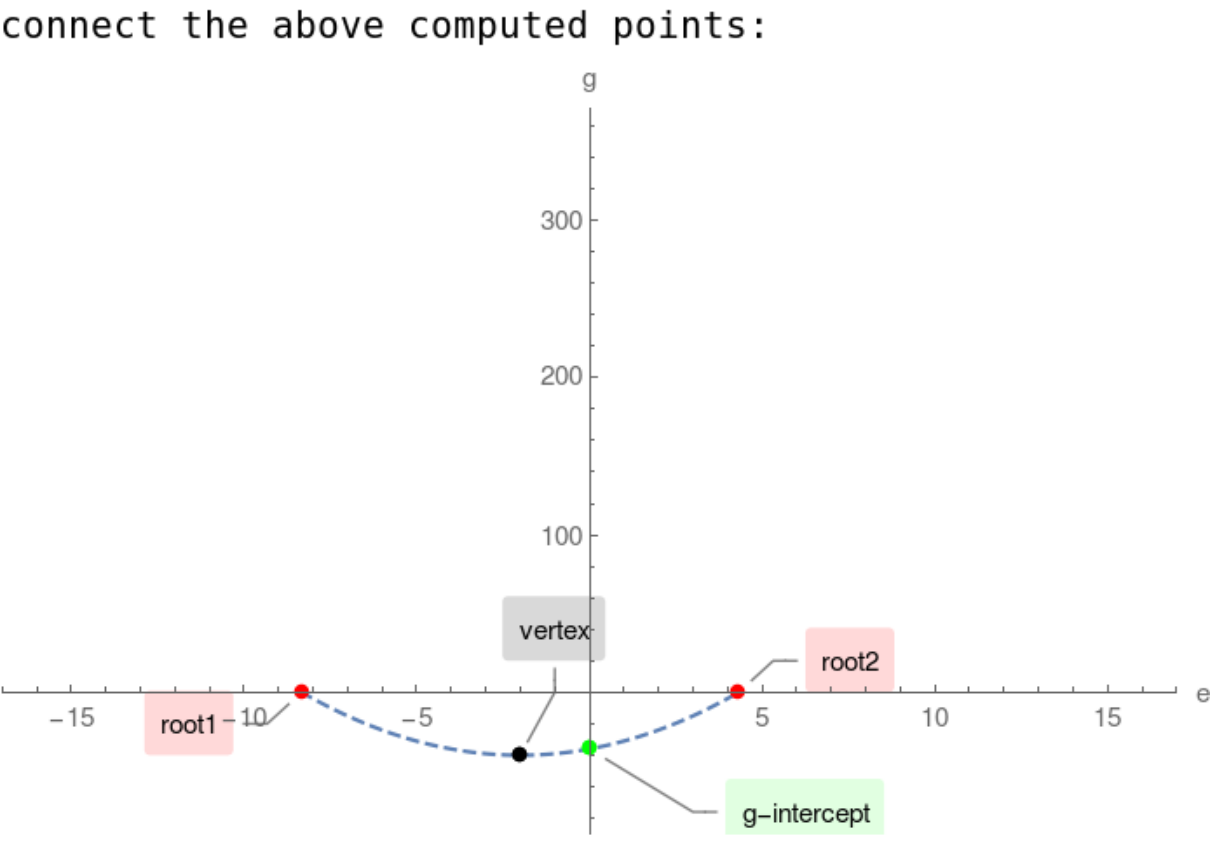
Compute e-intercepts by solving $e^2 + 4\,e - 36 = 0$:

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



Step 4.

connect the above computed points:



Step 5.

Extend the parabola beyond the range of intercepts