

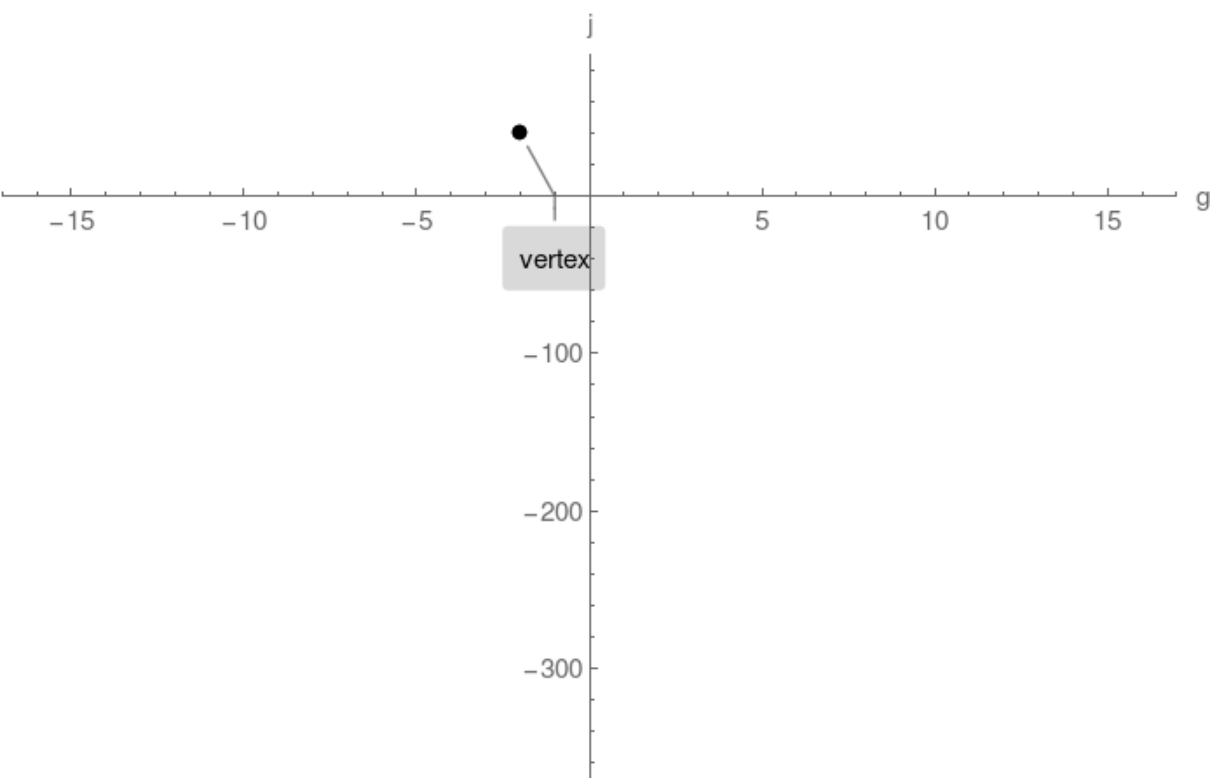
Example 1. 2 horizontal intercepts found

Plot $j(g) = -g^2 - 4g + 36$

Step 1.

Compute vertex and plot single point:

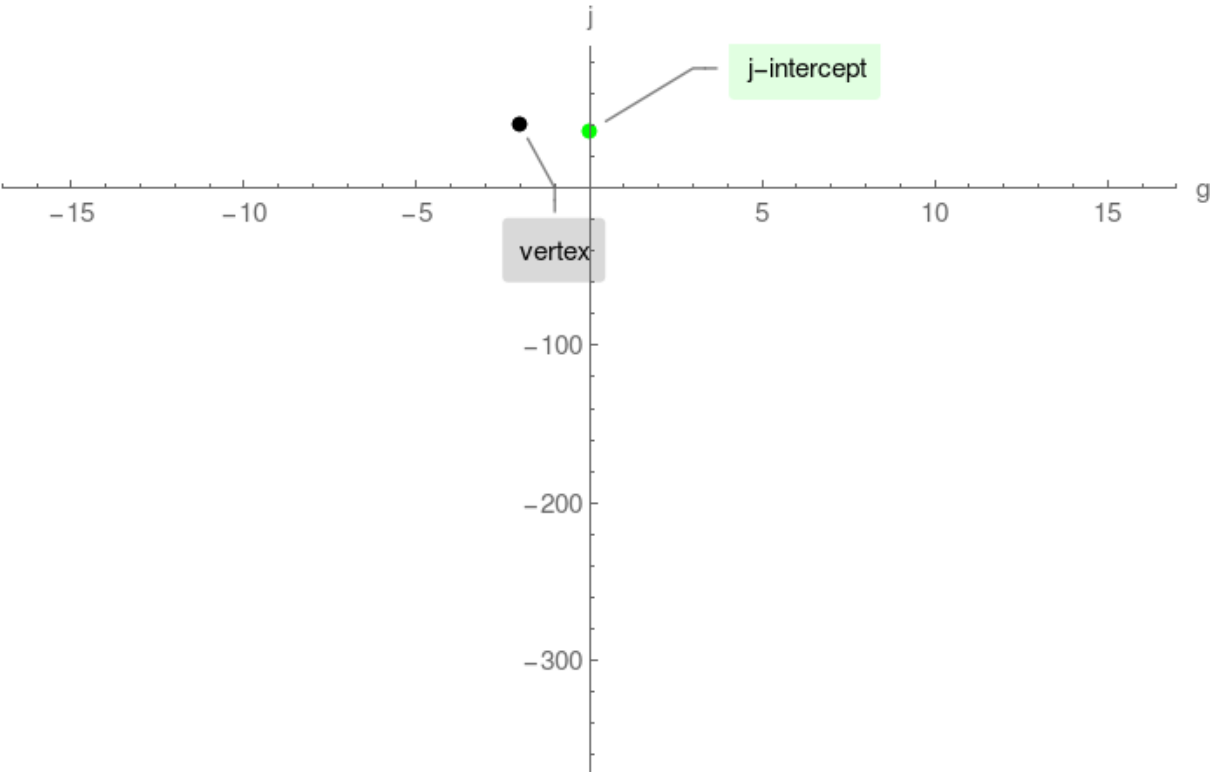
vertex = $(-2, 40)$



Step 2.

Compute j-intercept and plot single point:

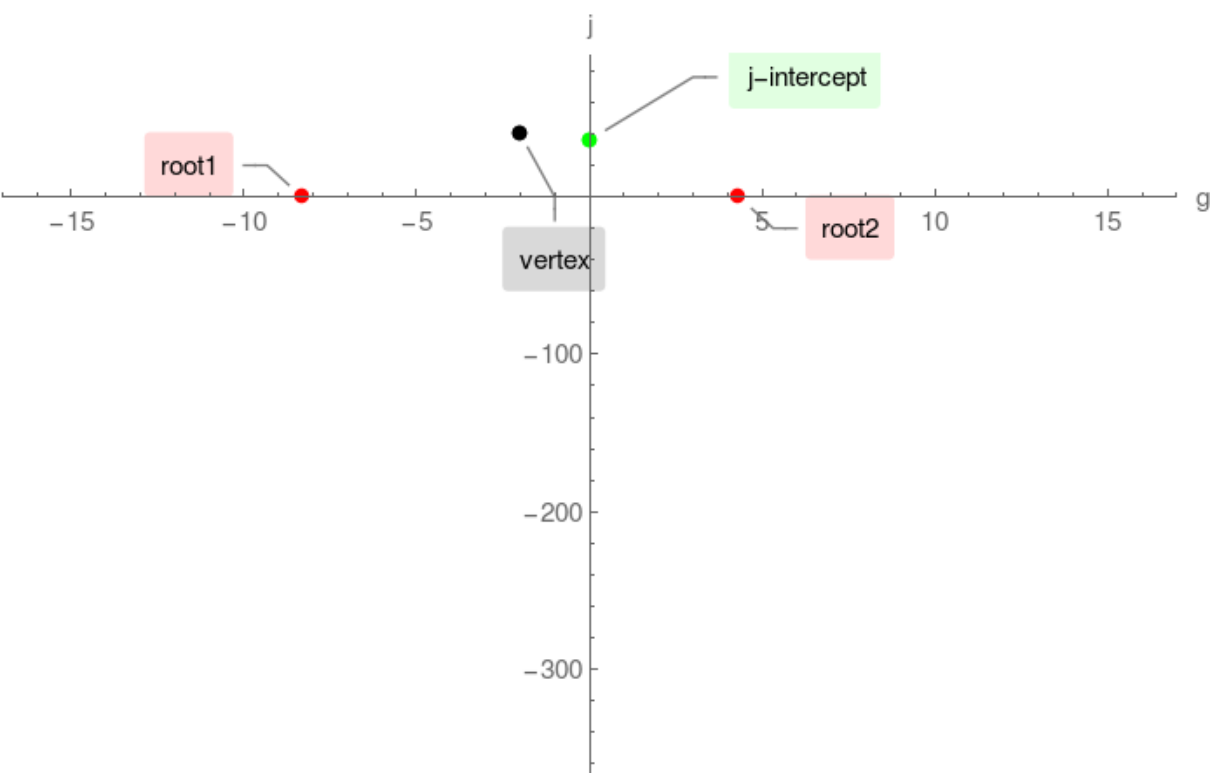
j-intercept = $(0, 36)$



Step 3.

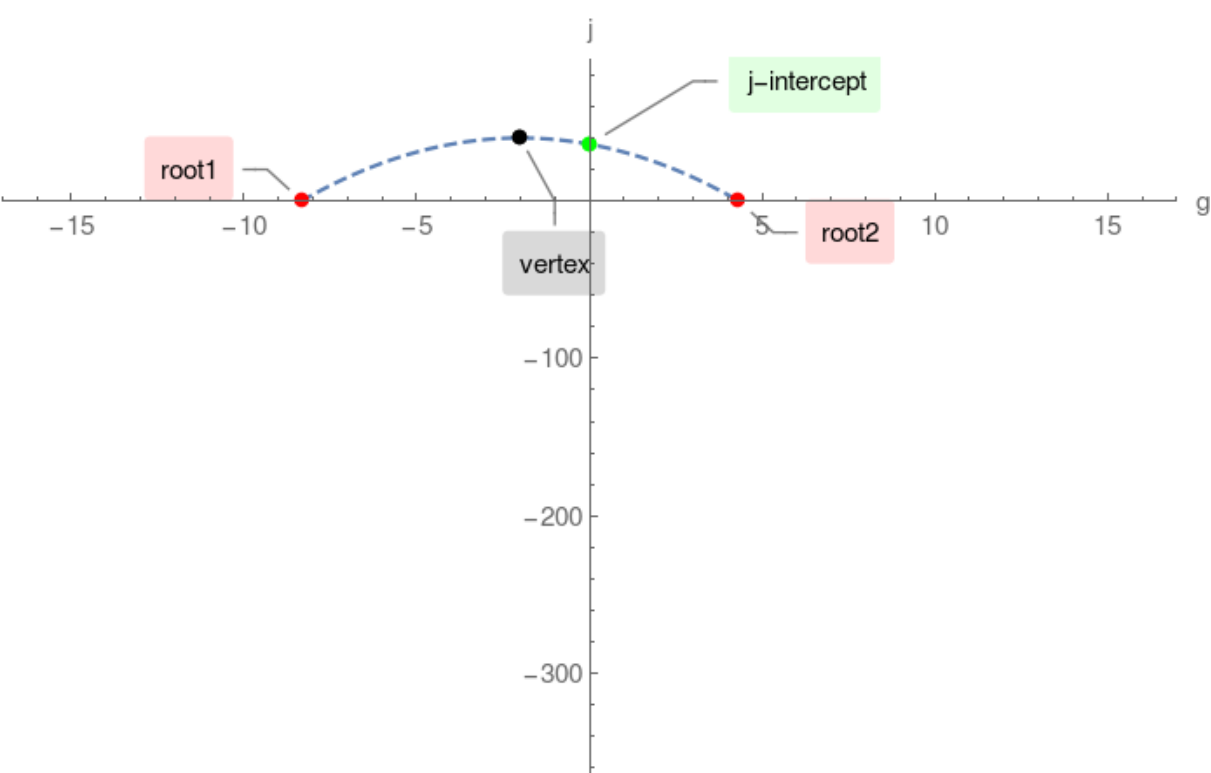
Compute g-intercepts by solving $-g^2 - 4g + 36 = 0$:

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



Step 4.

connect the above computed points:



Step 5.

Extend the parabola beyond the range of intercepts

