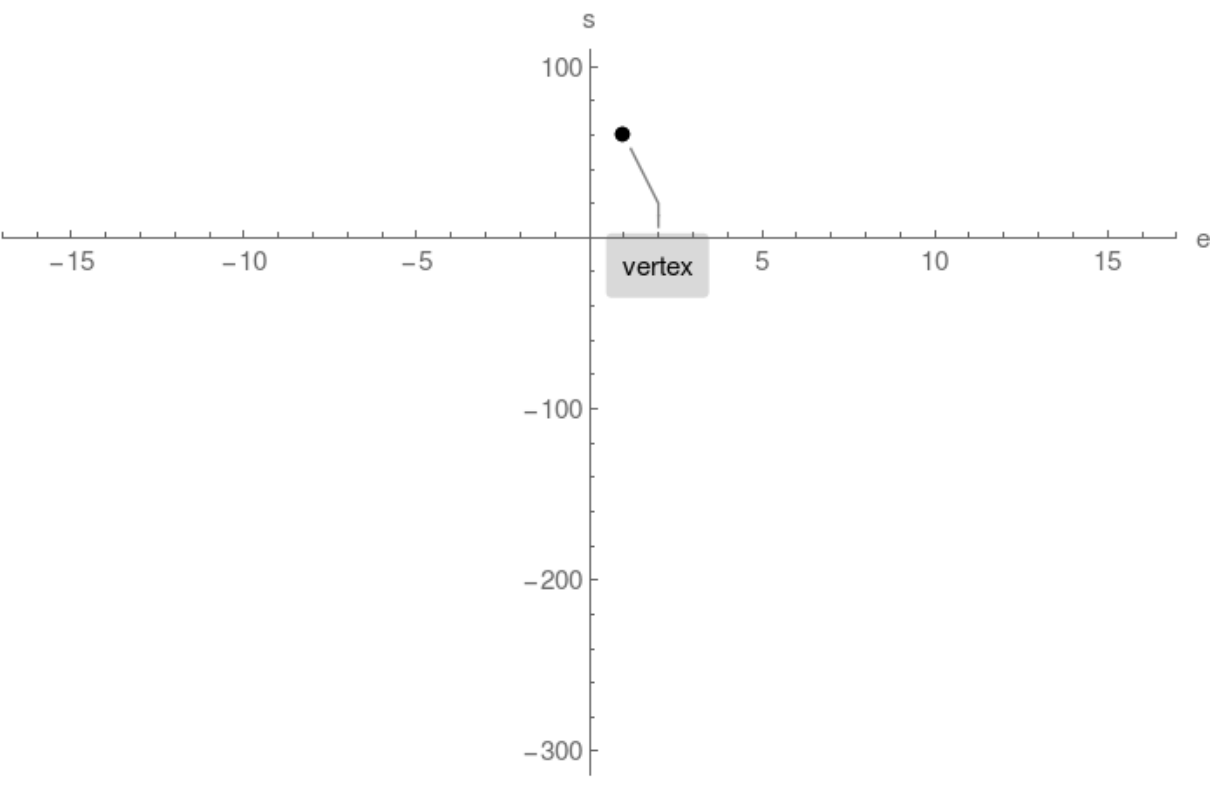
Example 1. 2 horizontal intercepts found

Plot $s(e) = -e^2 + 2e + 59$

Step 1.

Compute vertex and plot single point:

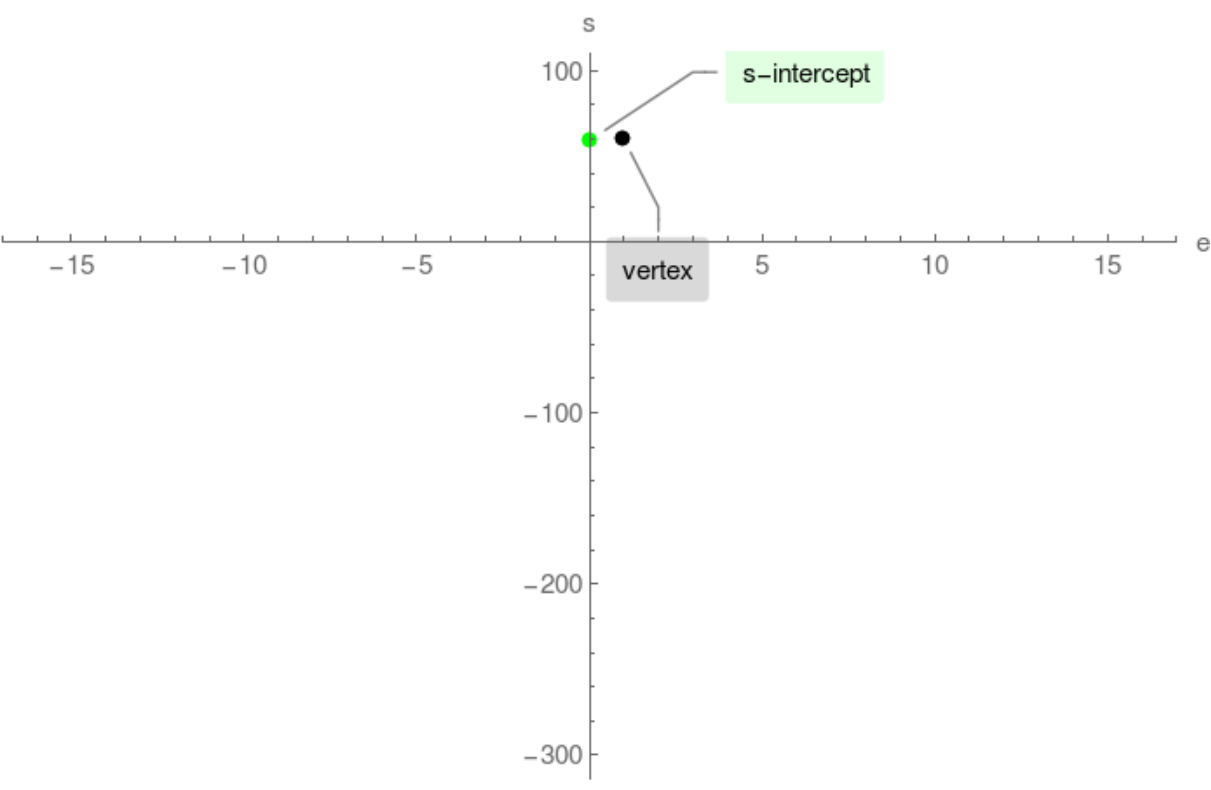
vertex $= (1, 60)$



Step 2.

Compute s-intercept and plot single point:

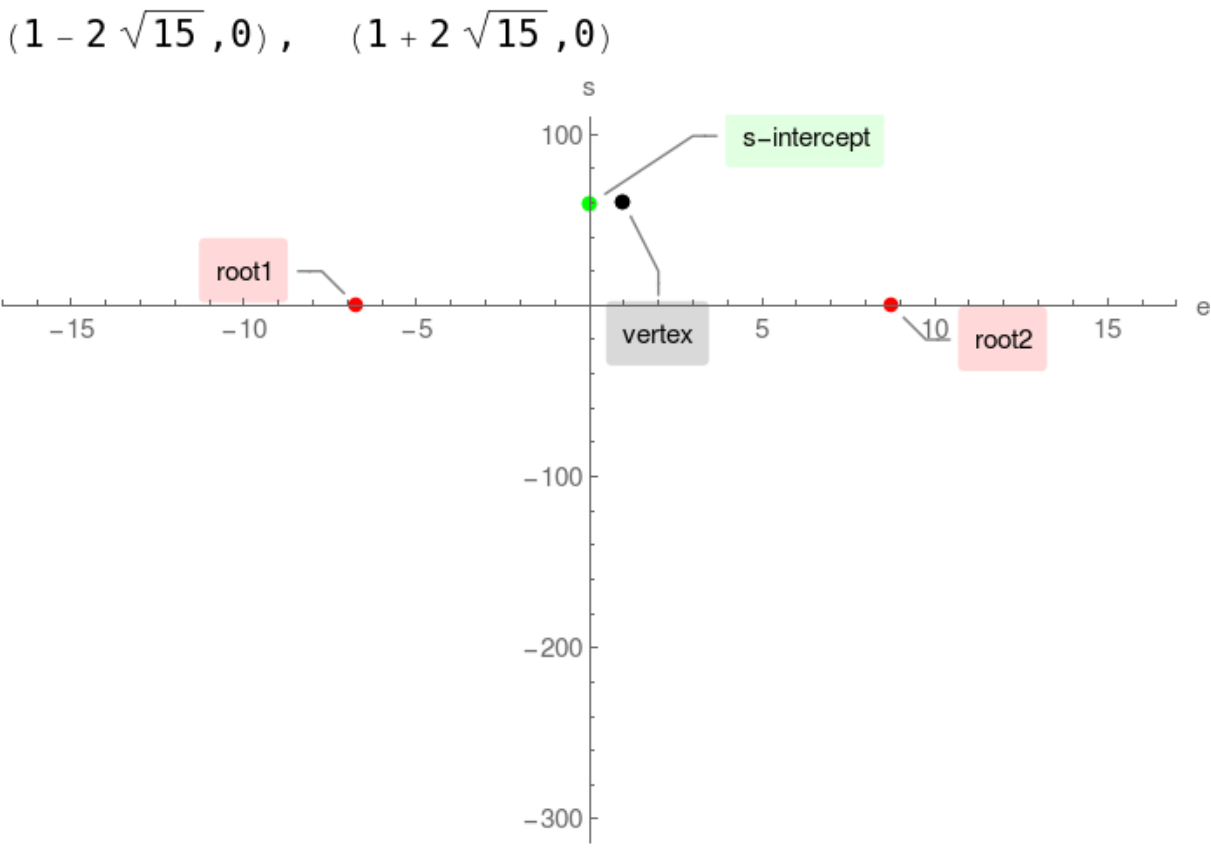
s-intercept $= (0, 59)$



Step 3.

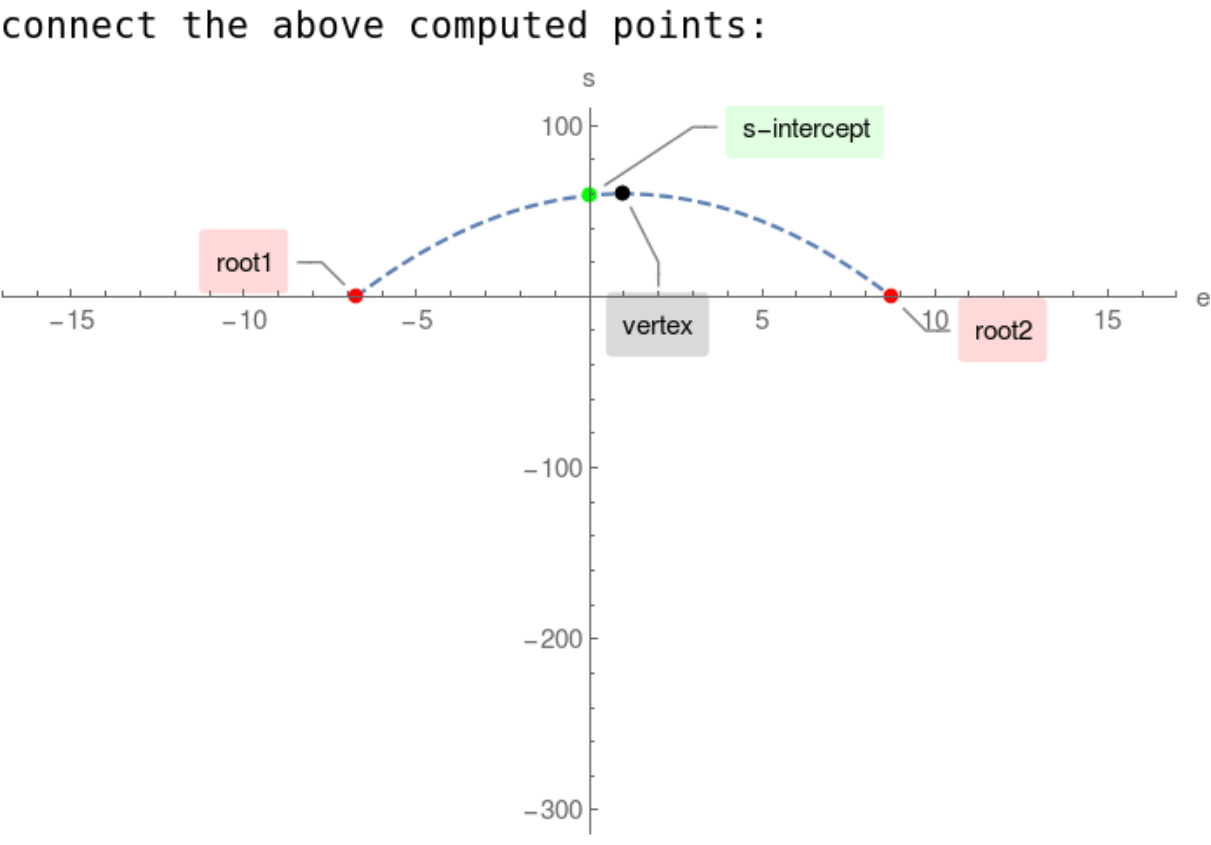
Compute e-intercepts by solving $-e^2 + 2e + 59 = 0$:

$(1 - 2\sqrt{15}, 0)$, $(1 + 2\sqrt{15}, 0)$



Step 4.

connect the above computed points:



Step 5.

Extend the parabola beyond the range of intercepts