

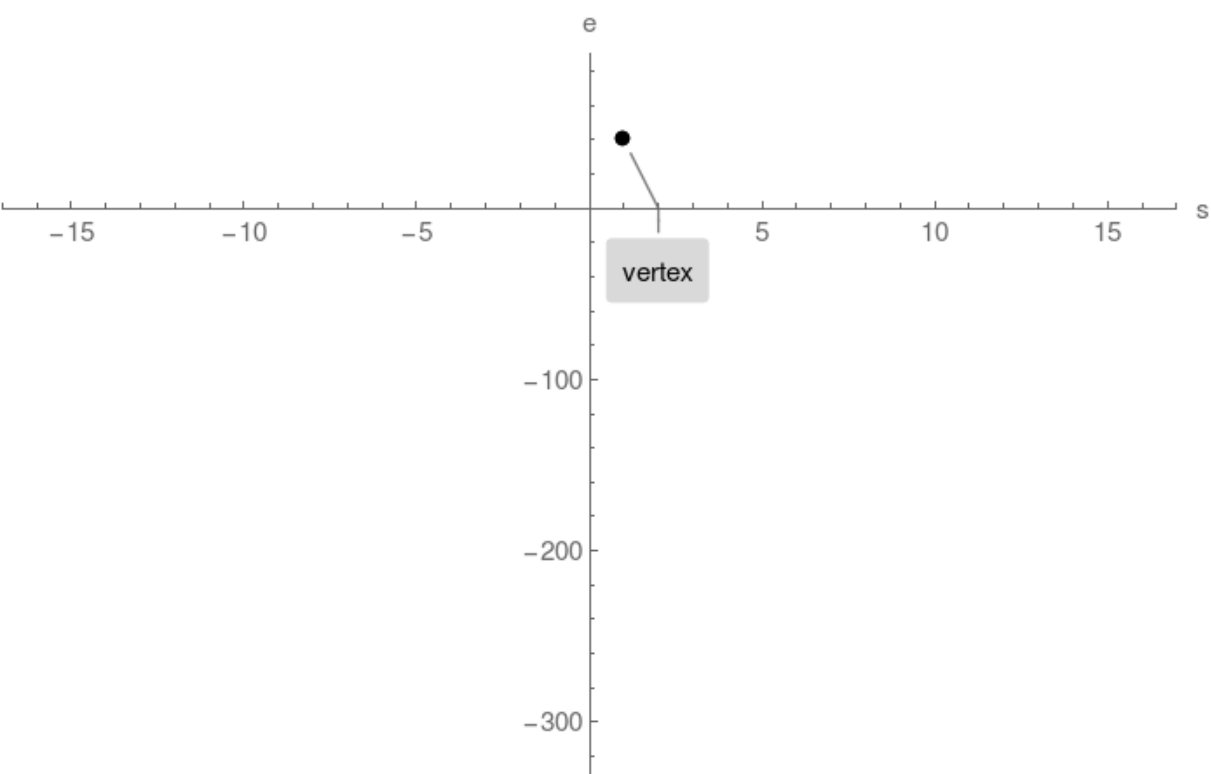
## Example 1. 2 horizontal intercepts found

Plot  $e(s) = -s^2 + 2s + 39$

### Step 1.

Compute vertex and plot single point:

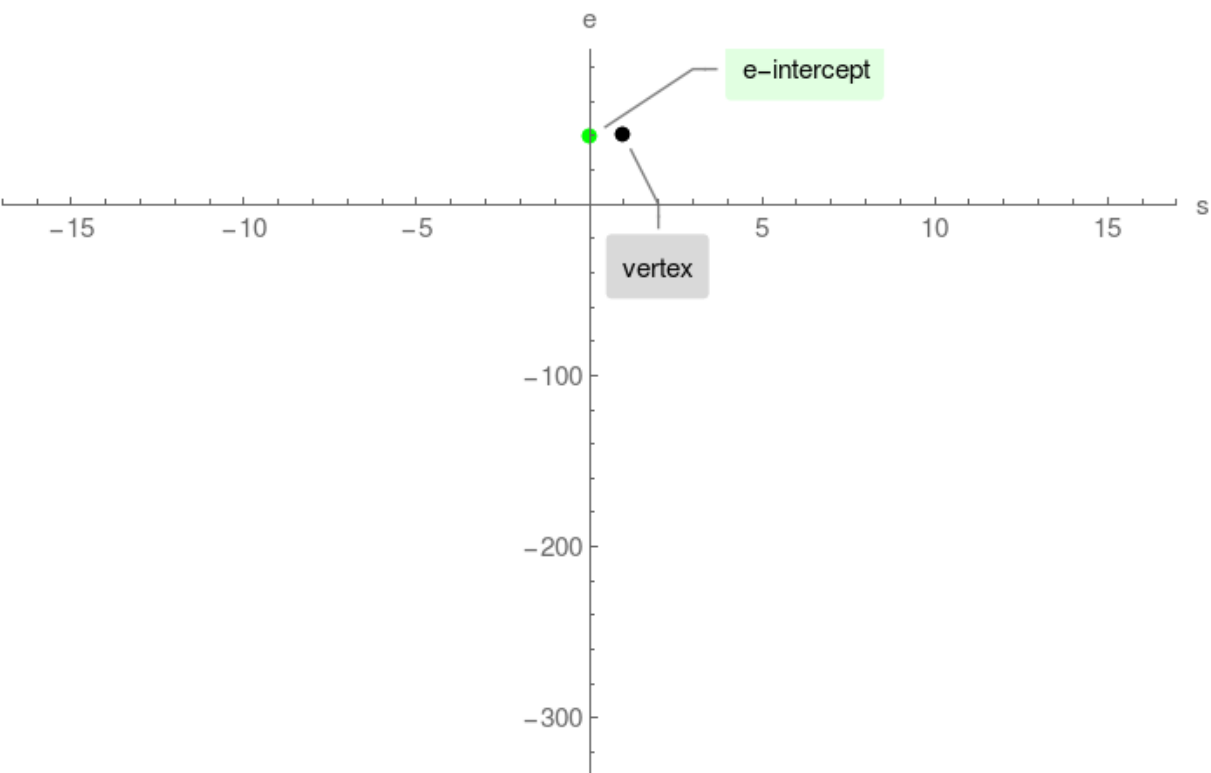
vertex =  $(1, 40)$



### Step 2.

Compute e-intercept and plot single point:

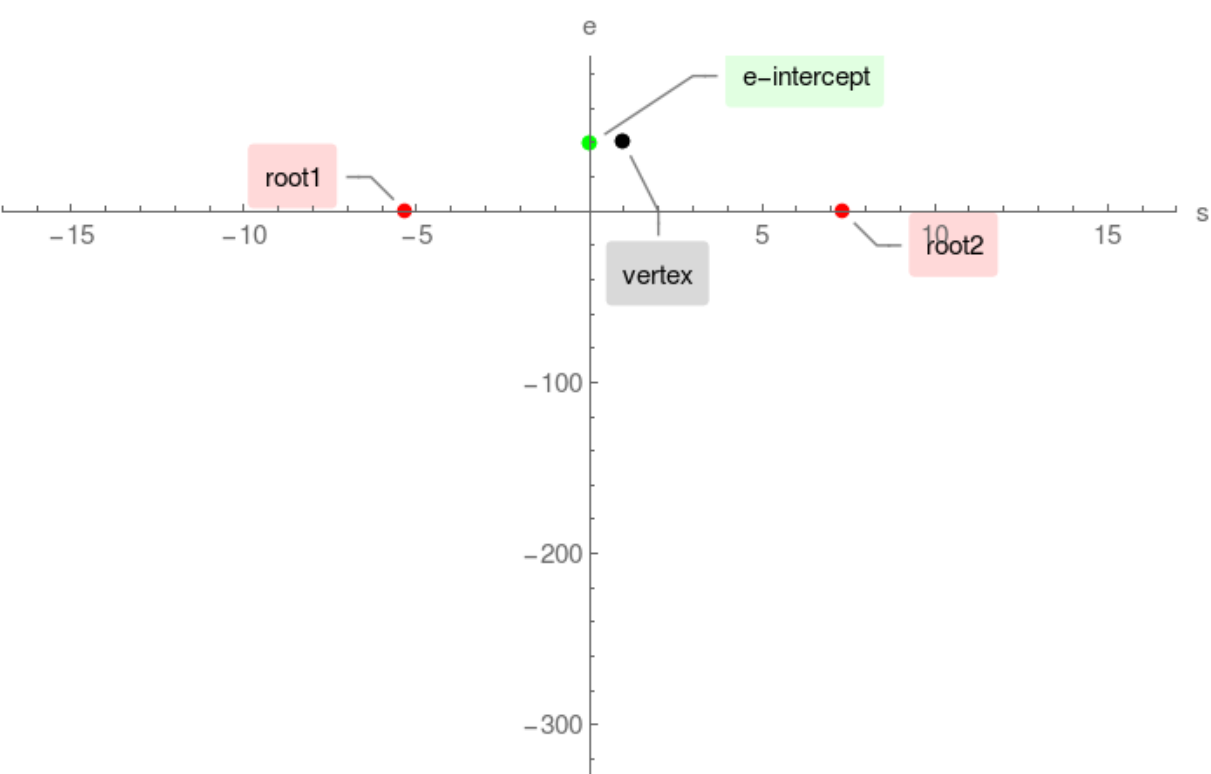
e-intercept =  $(0, 39)$



### Step 3.

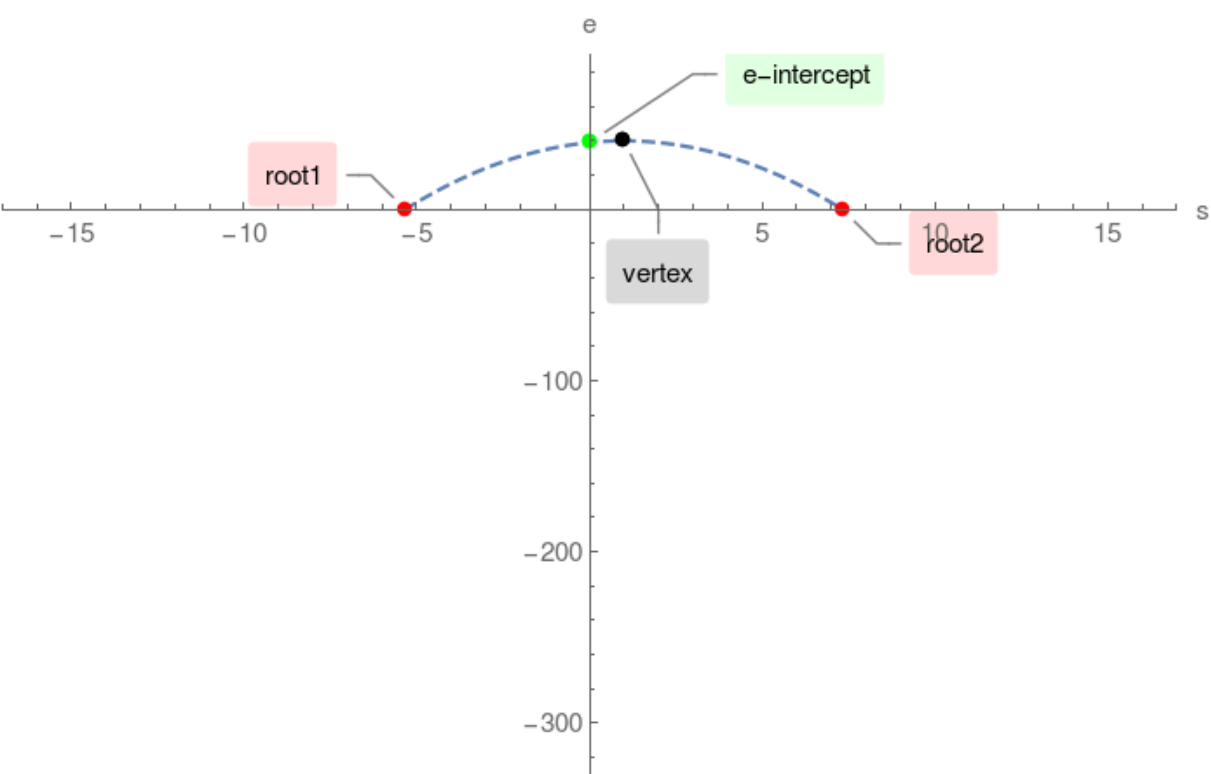
Compute s-intercepts by solving  $-s^2 + 2s + 39 = 0$ :

$(1 - 2\sqrt{10}, 0)$ ,  $(1 + 2\sqrt{10}, 0)$



### Step 4.

connect the above computed points:



### Step 5.

Extend the parabola beyond the range of intercepts

