

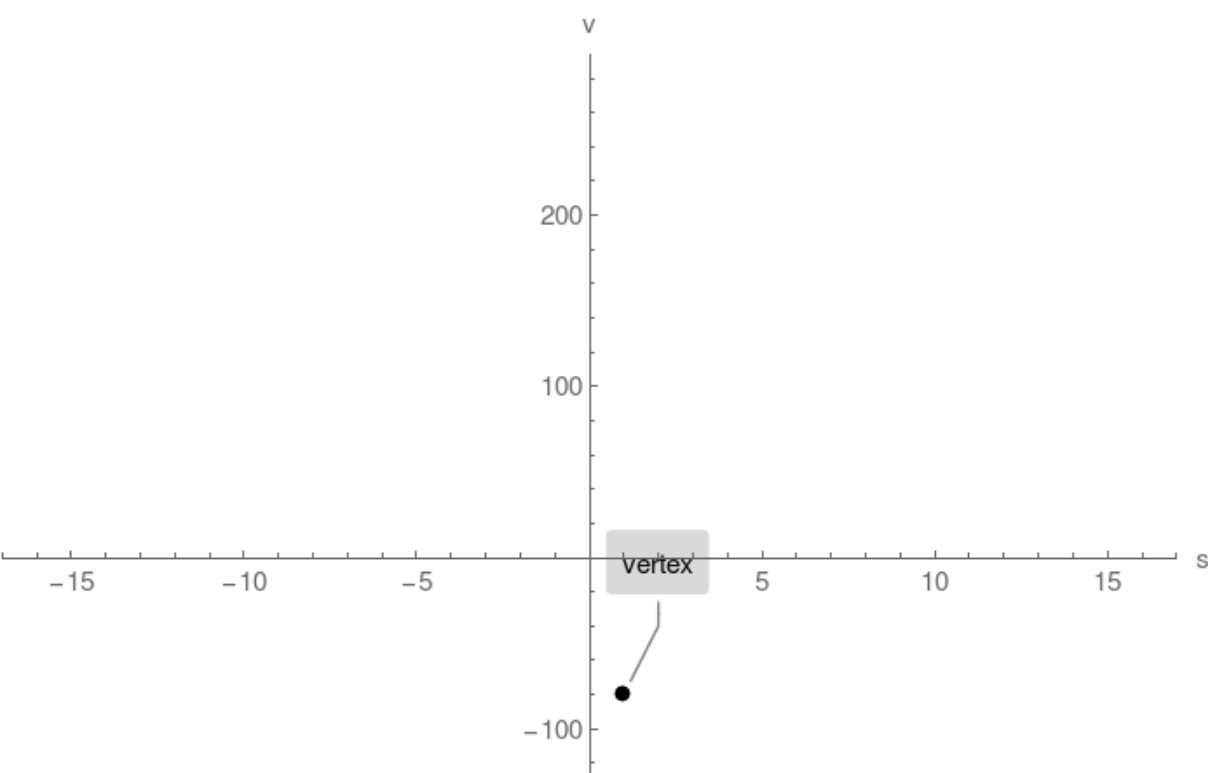
## Example 1. 2 horizontal intercepts found

Plot  $v(s) = s^2 - 2s - 79$

### Step 1.

Compute vertex and plot single point:

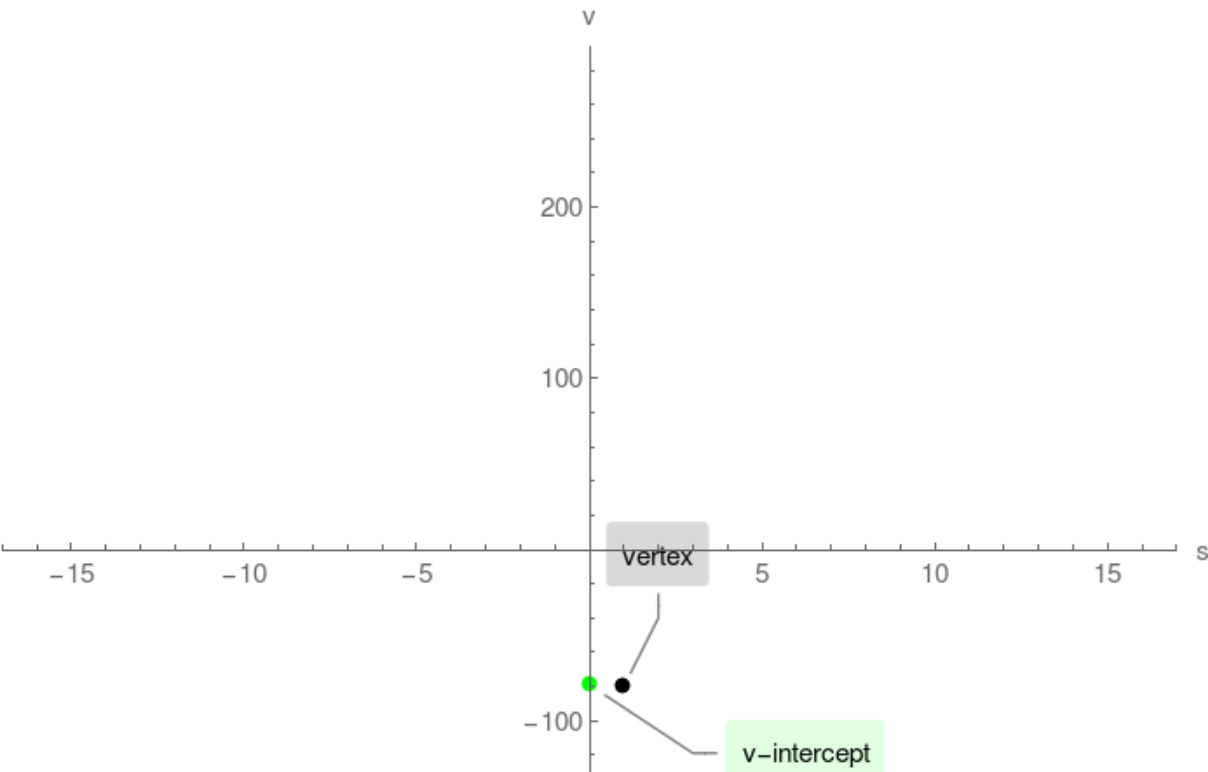
vertex =  $(1, -80)$



### Step 2.

Compute v-intercept and plot single point:

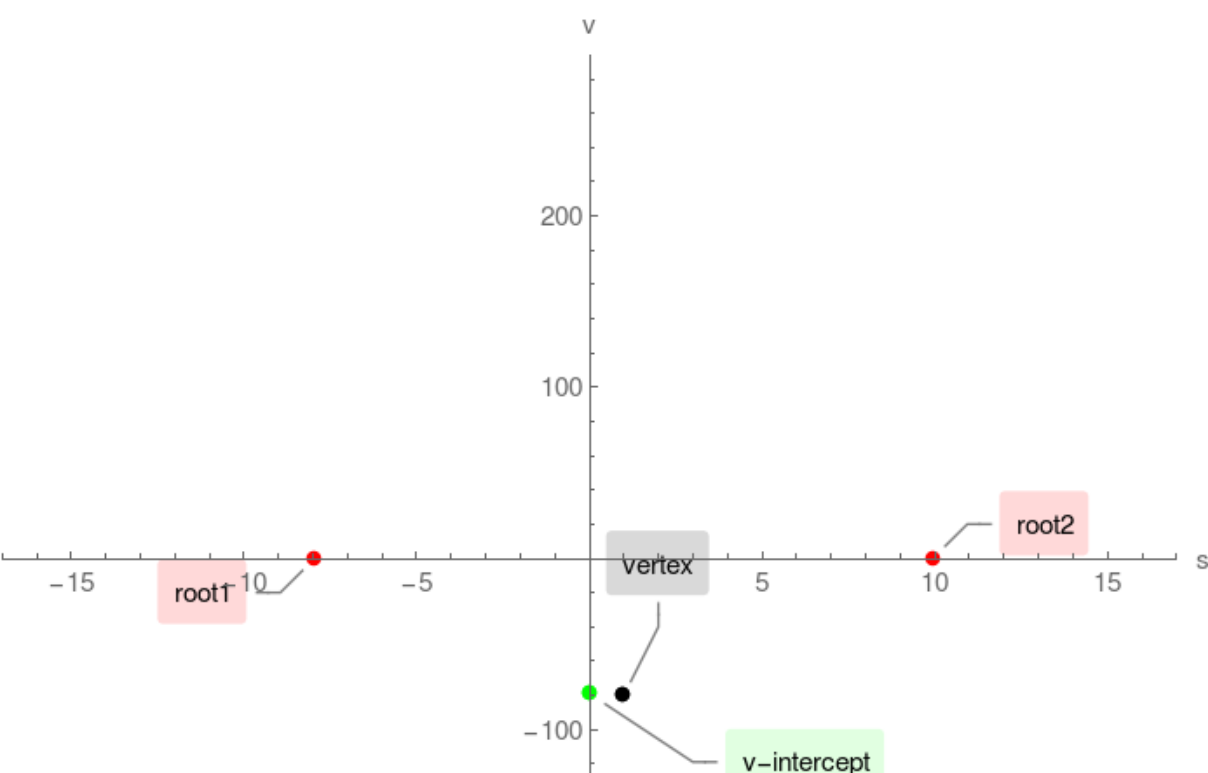
v-intercept =  $(0, -79)$



### Step 3.

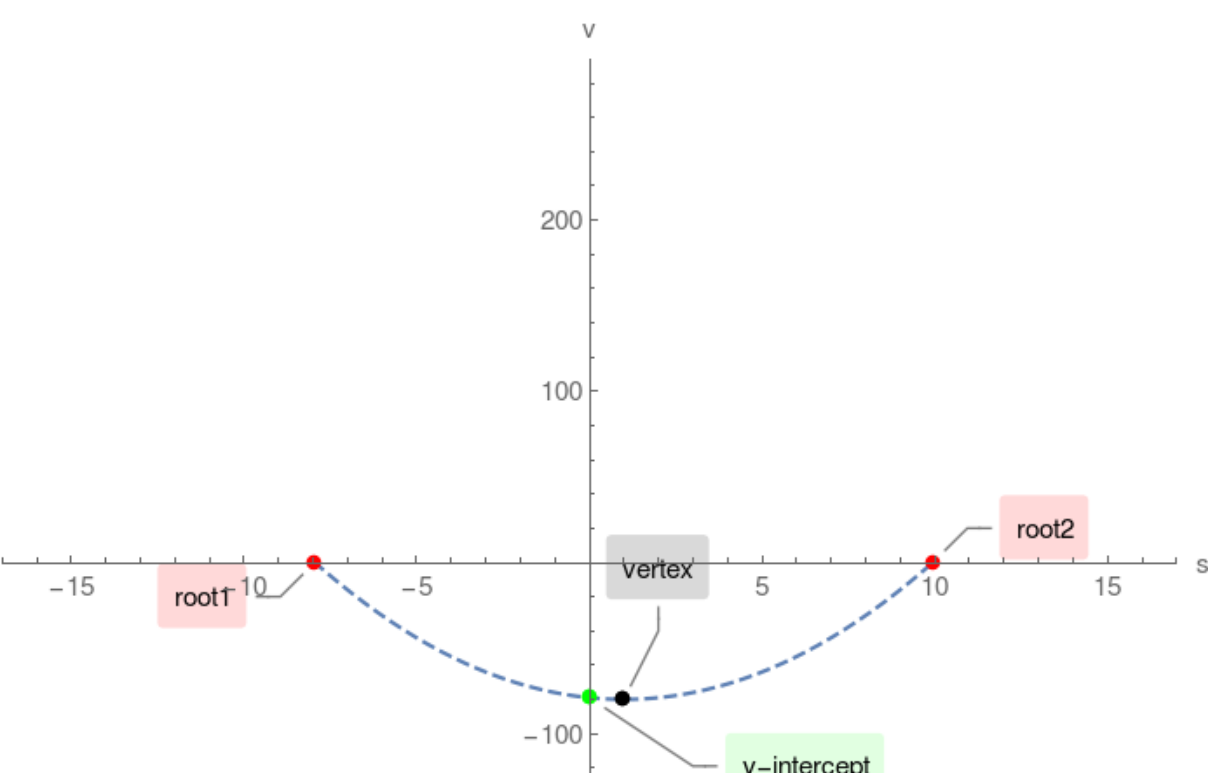
Compute s-intercepts by solving  $s^2 - 2s - 79 = 0$ :

$(1 - 4\sqrt{5}, 0)$ ,  $(1 + 4\sqrt{5}, 0)$



### Step 4.

connect the above computed points:



### Step 5.

Extend the parabola beyond the range of intercepts

