

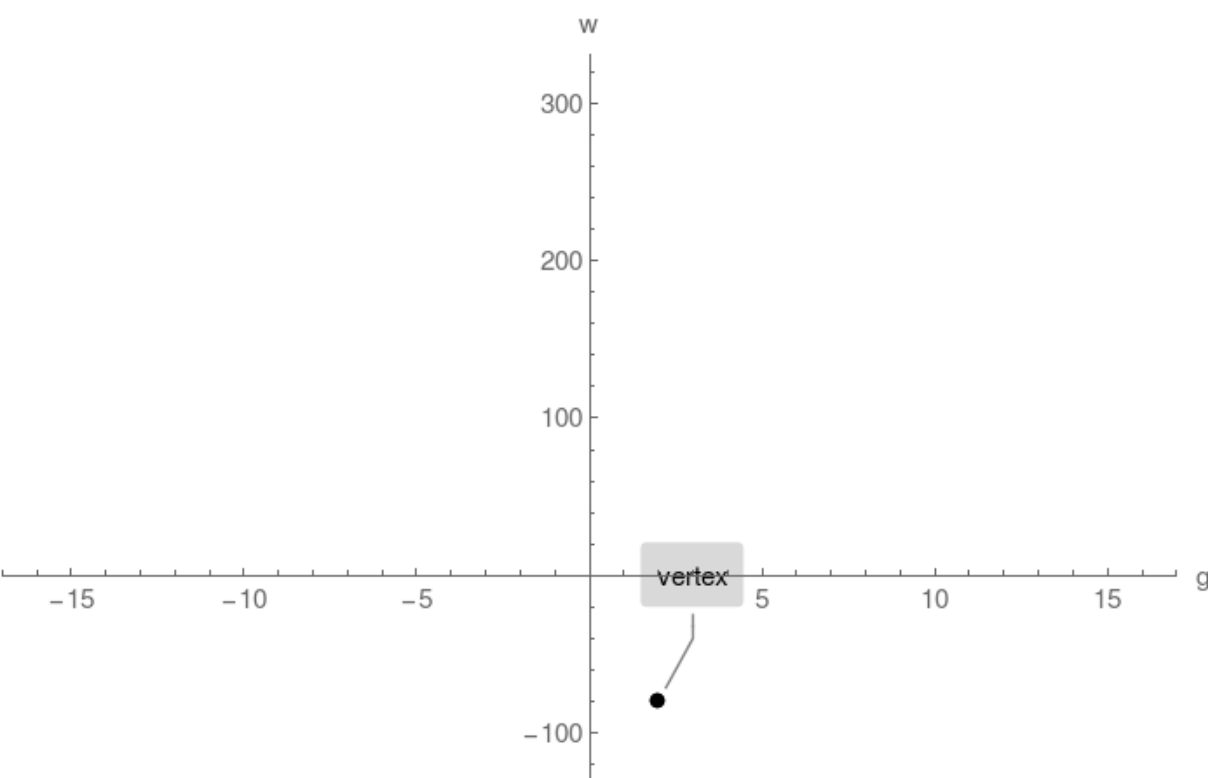
## Example 1. 2 horizontal intercepts found

Plot  $w(g) = g^2 - 4g - 76$

### Step 1.

Compute vertex and plot single point:

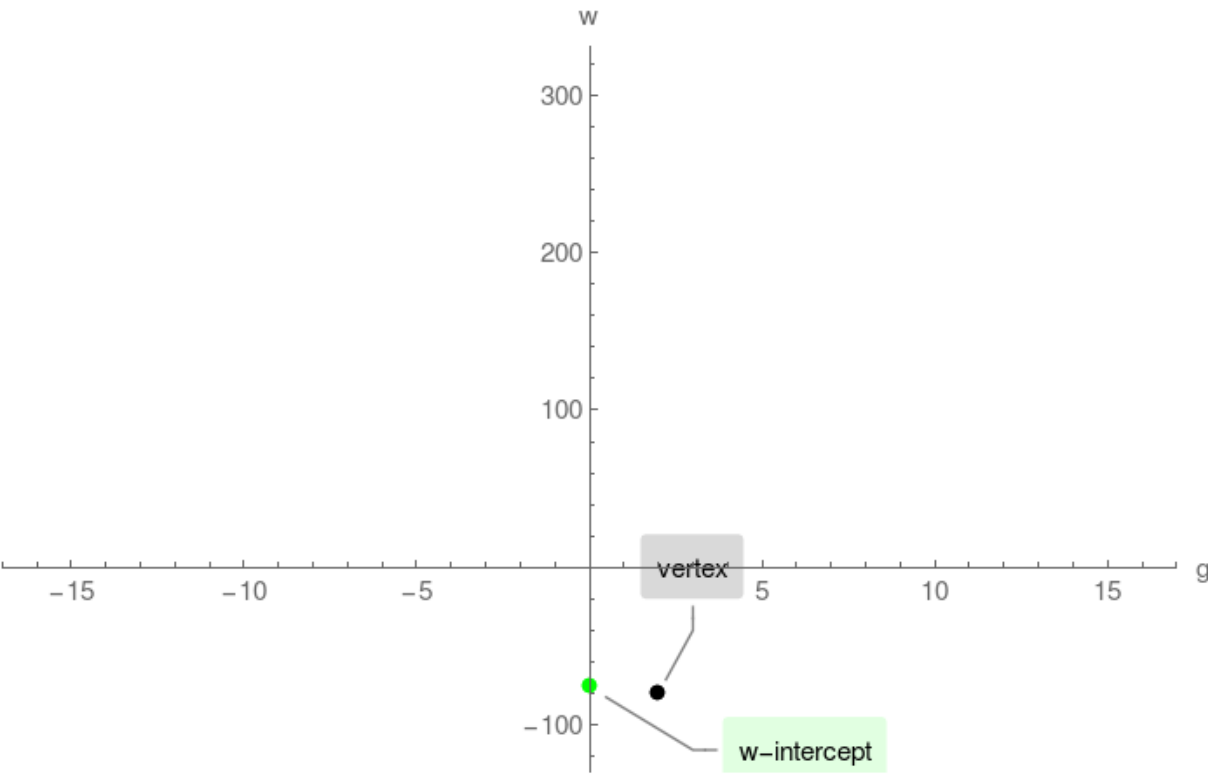
vertex =  $(2, -80)$



### Step 2.

Compute w-intercept and plot single point:

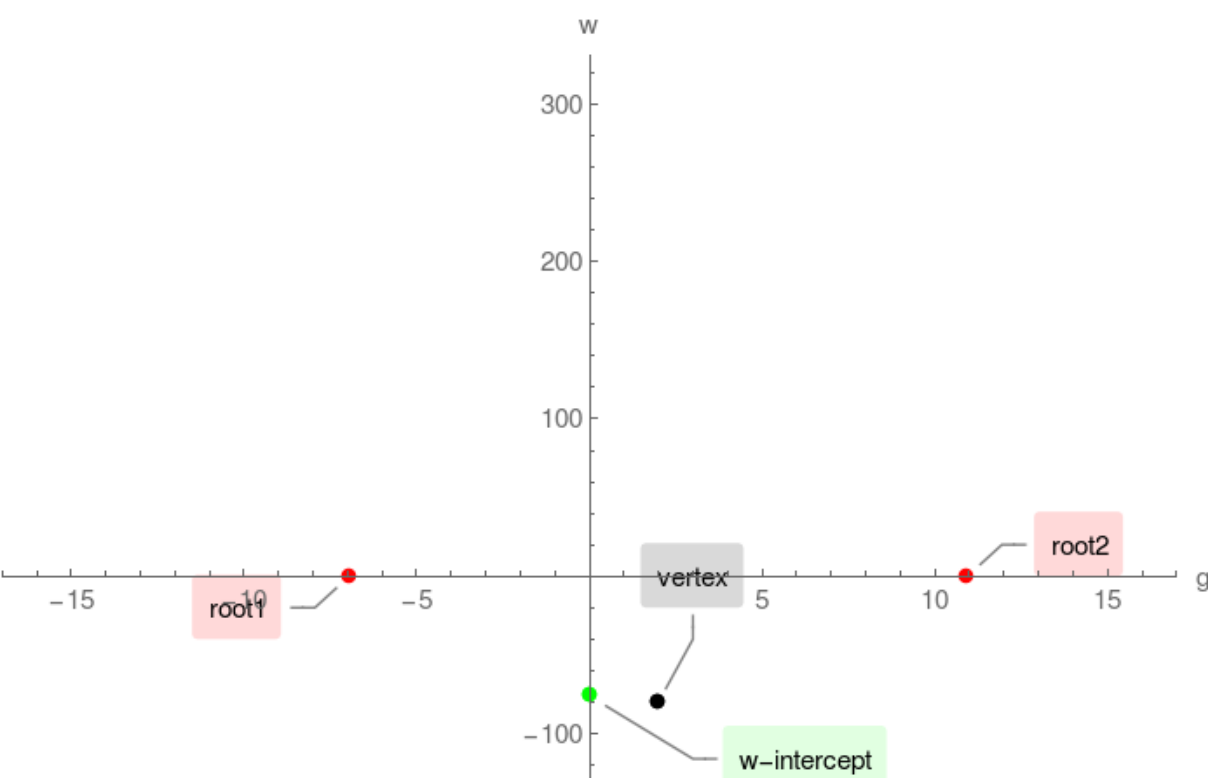
w-intercept =  $(0, -76)$



### Step 3.

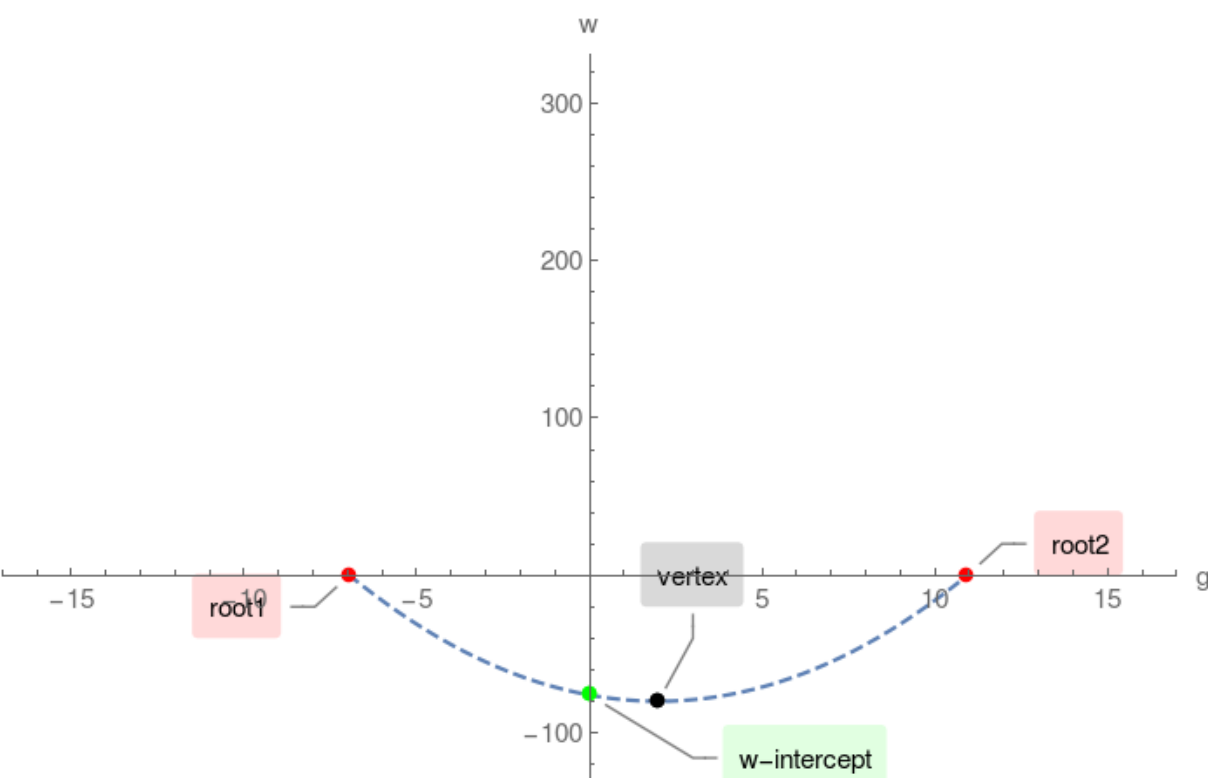
Compute g-intercepts by solving  $g^2 - 4g - 76 = 0$ :

$(2 - 4\sqrt{5}, 0)$ ,  $(2 + 4\sqrt{5}, 0)$



### Step 4.

connect the above computed points:



### Step 5.

Extend the parabola beyond the range of intercepts

