

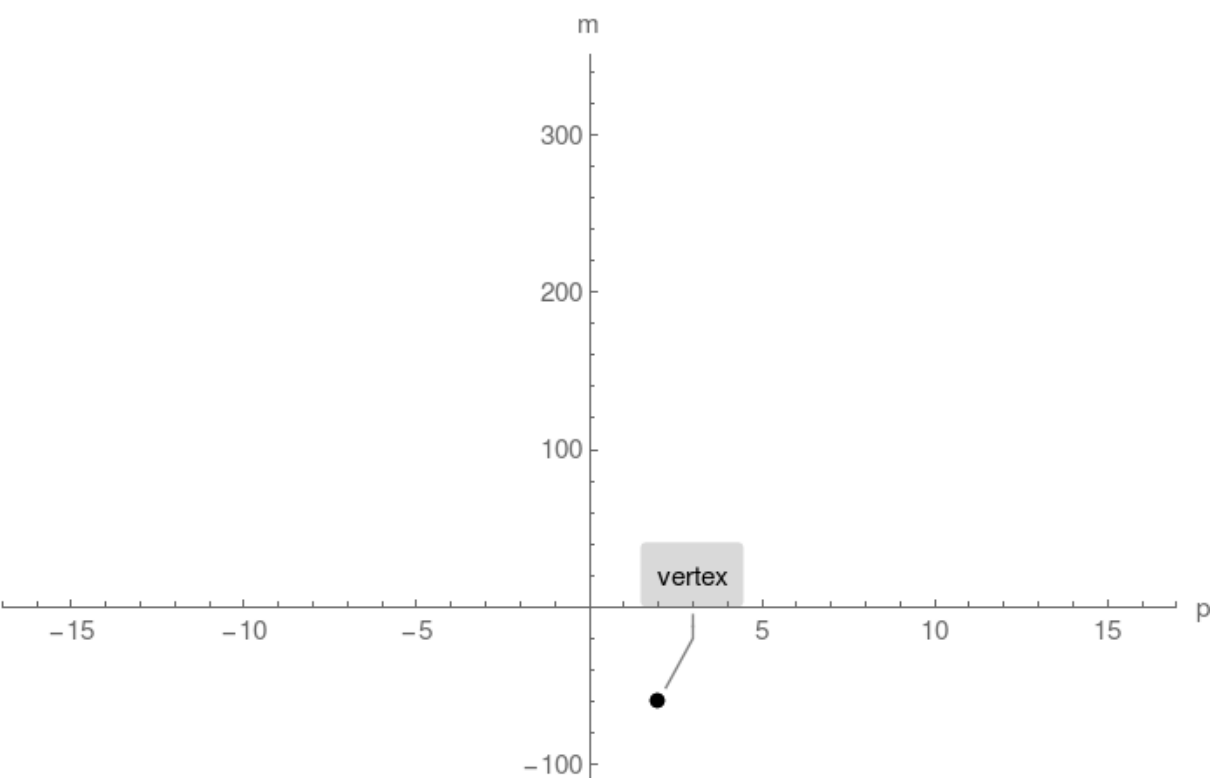
## Example 1. 2 horizontal intercepts found

Plot  $m(p) = p^2 - 4p - 56$

### Step 1.

Compute vertex and plot single point:

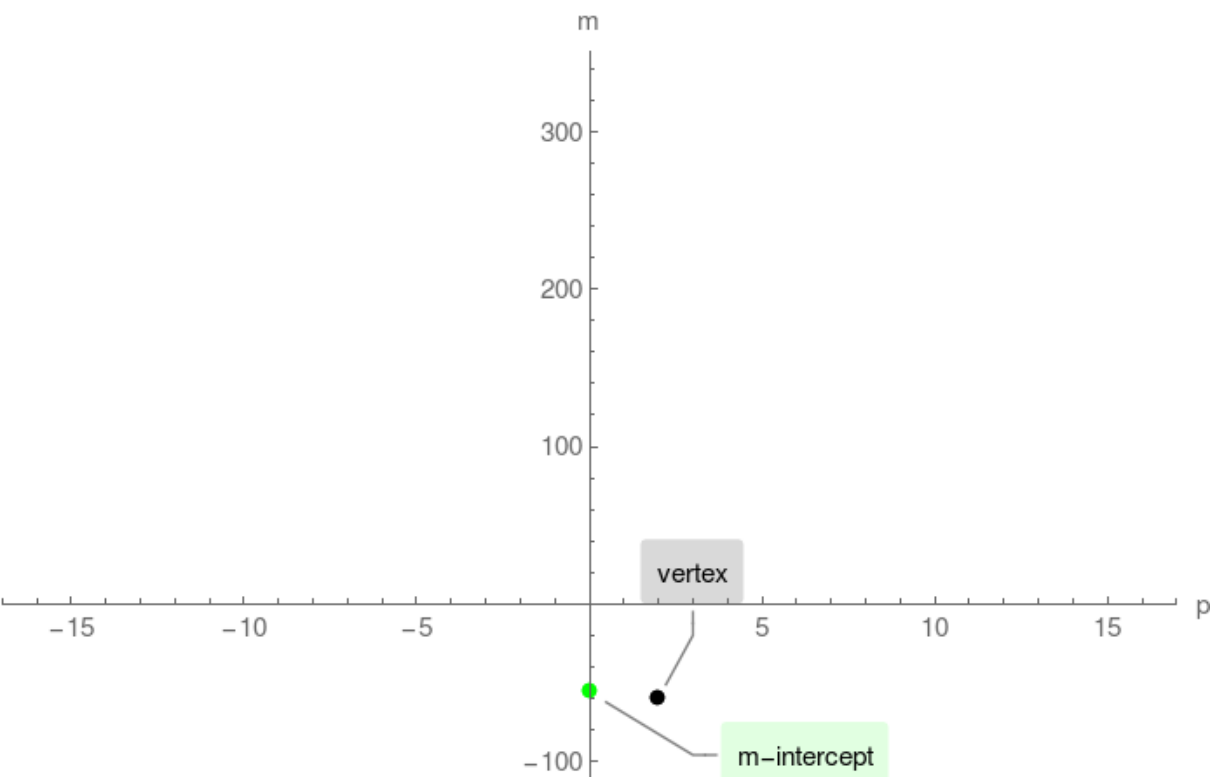
vertex =  $(2, -60)$



### Step 2.

Compute m-intercept and plot single point:

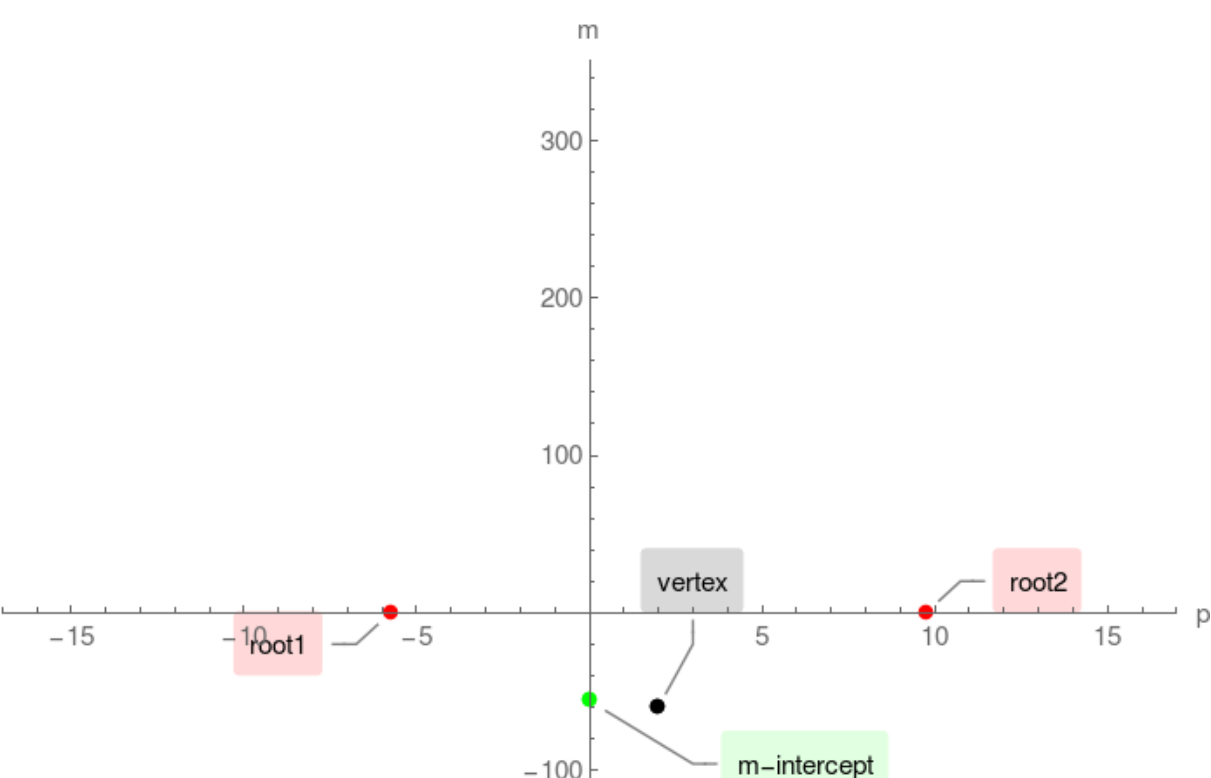
m-intercept =  $(0, -56)$



### Step 3.

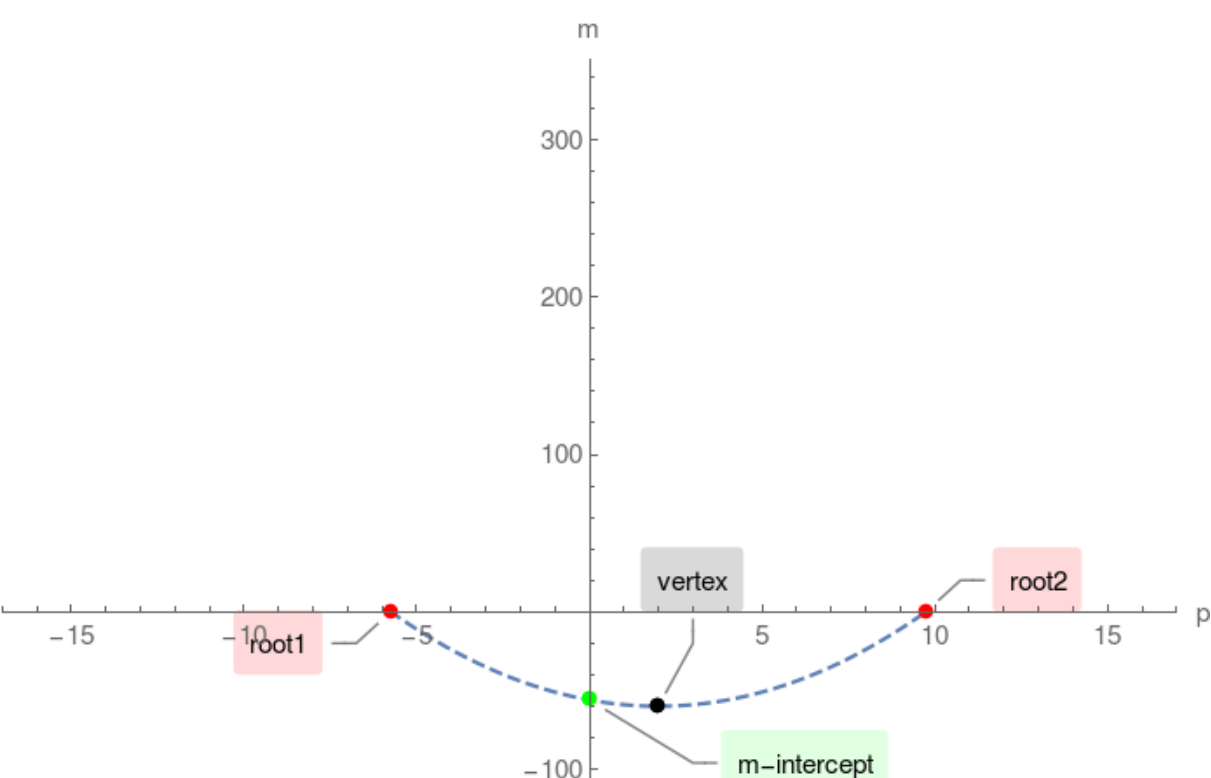
Compute p-intercepts by solving  $p^2 - 4p - 56 = 0$ :

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



### Step 4.

connect the above computed points:



### Step 5.

Extend the parabola beyond the range of intercepts

