

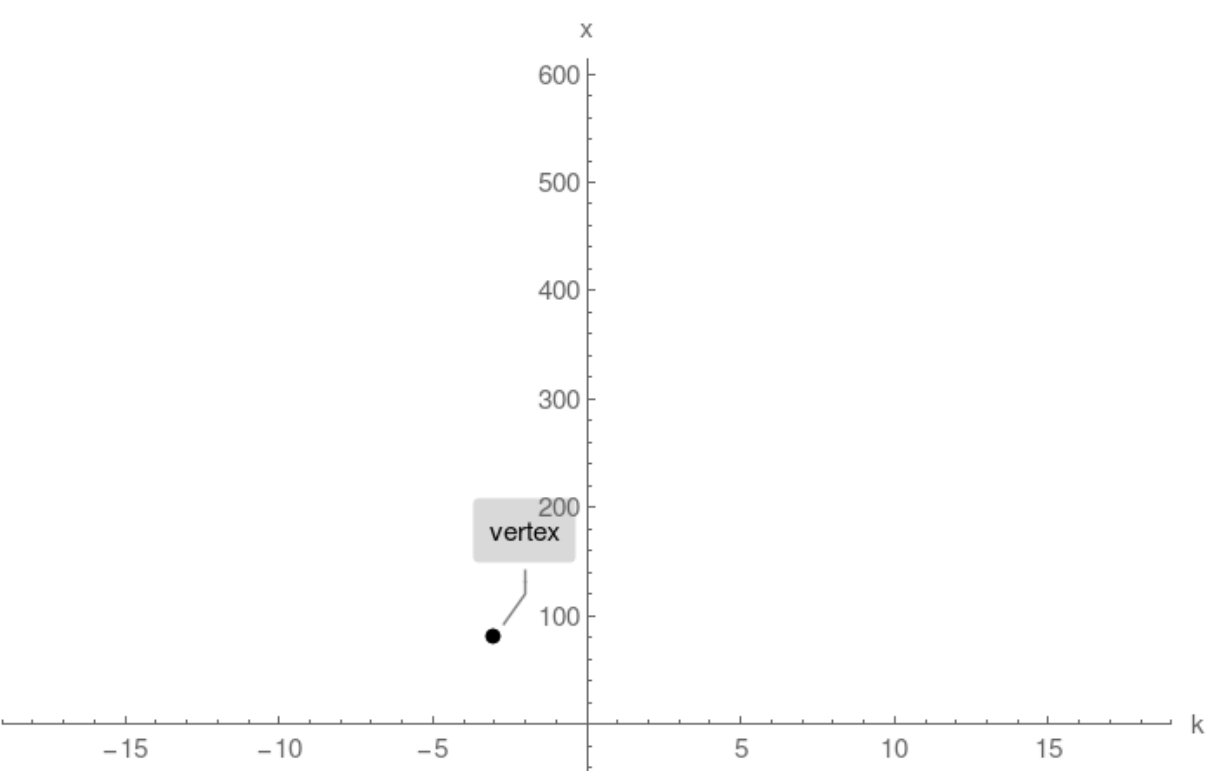
## Example 2. No horizontal intercepts found

Plot  $x(k) = k^2 + 6k + 89$

### Step 1.

Compute vertex and plot single point:

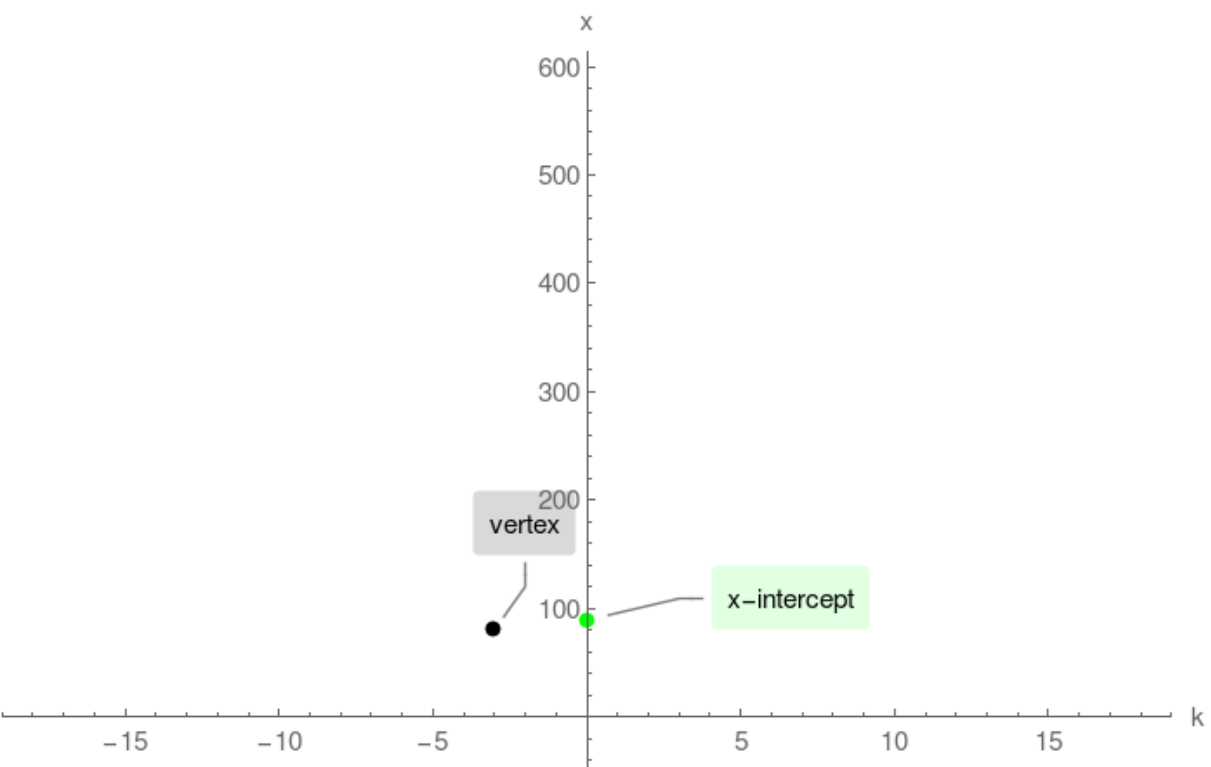
vertex =  $(-3, 80)$



### Step 2.

Compute x-intercept and plot single point:

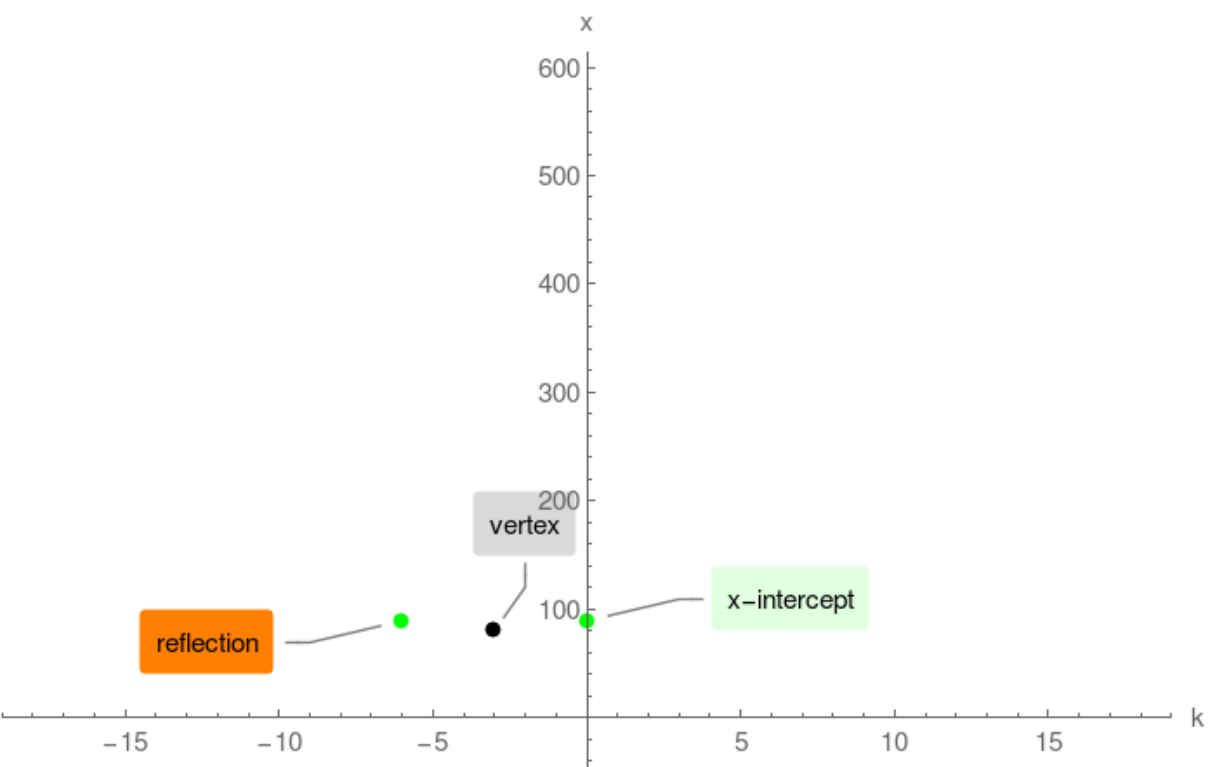
x-intercept =  $(0, 89)$



### Step 3.

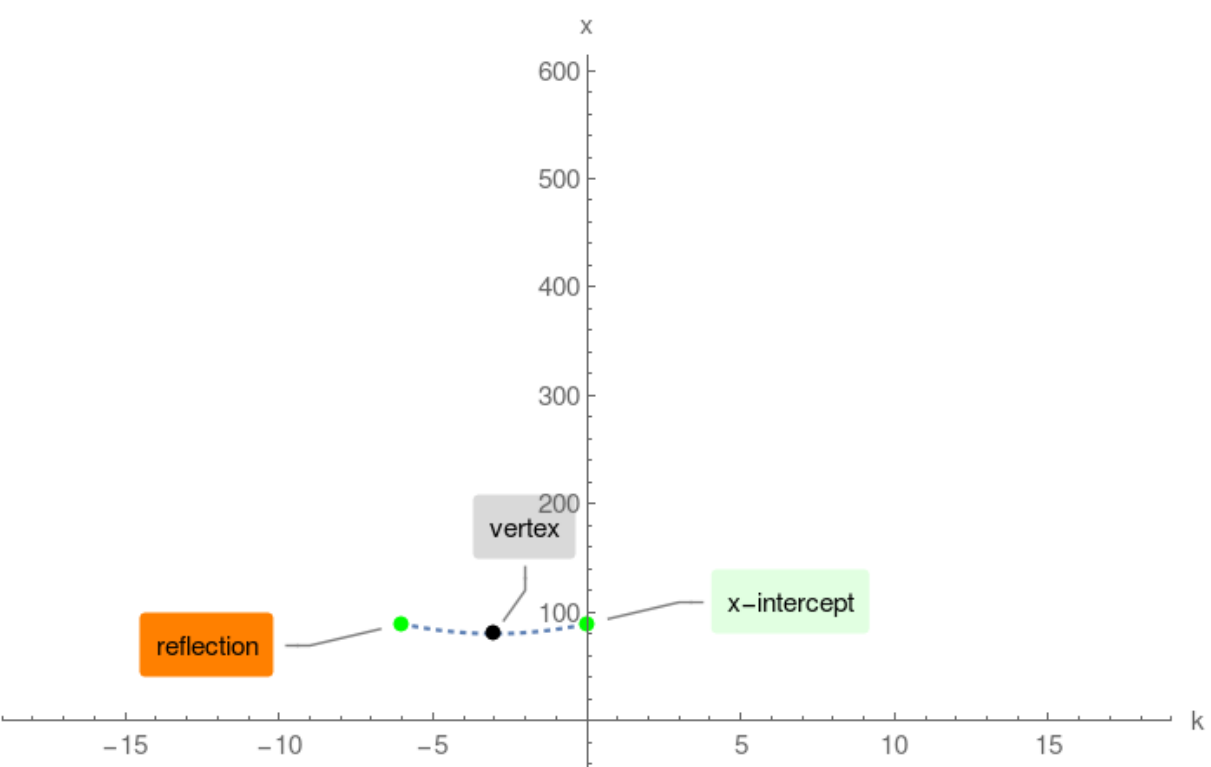
Compute x-intercept reflected against vertex,

reflection =  $(-6, 89)$



### Step 4.

connect the above computed points:



### Step 5.

Extend the parabola beyond the range of intercepts

