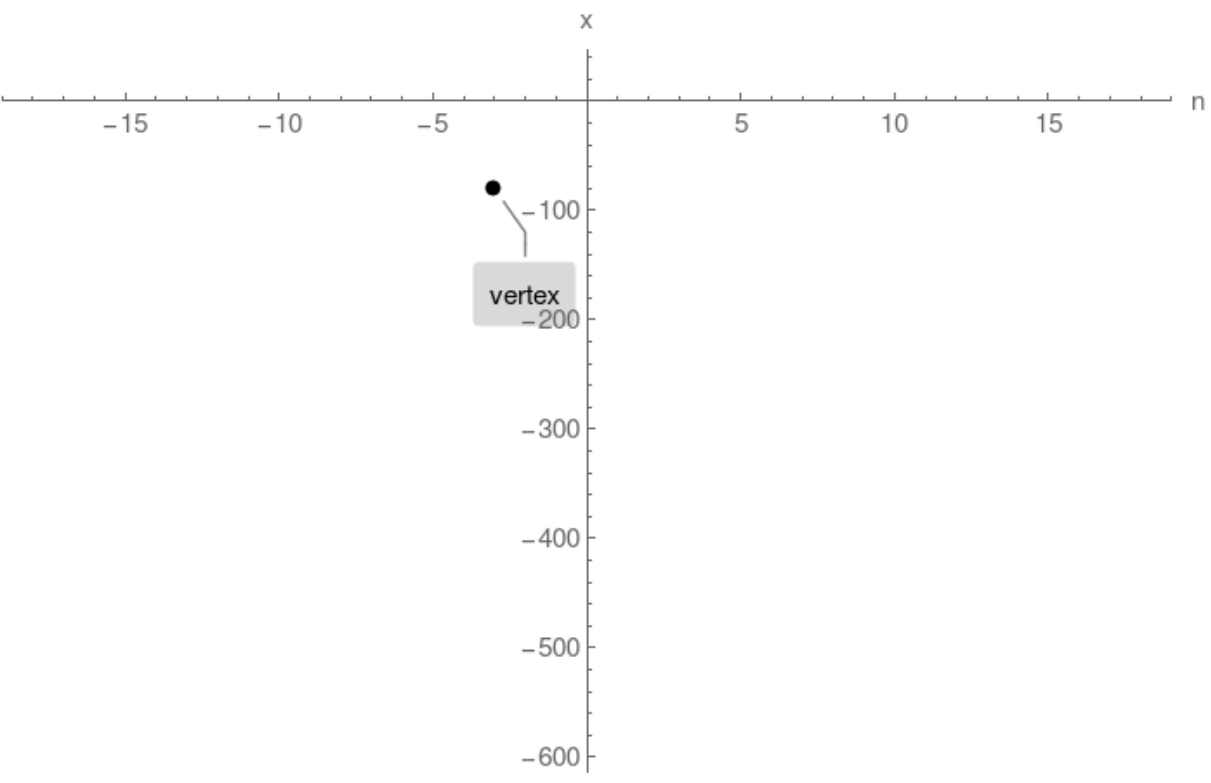
Example 2. No horizontal intercepts found

Plot $x(n) = -n^2 - 6n - 89$

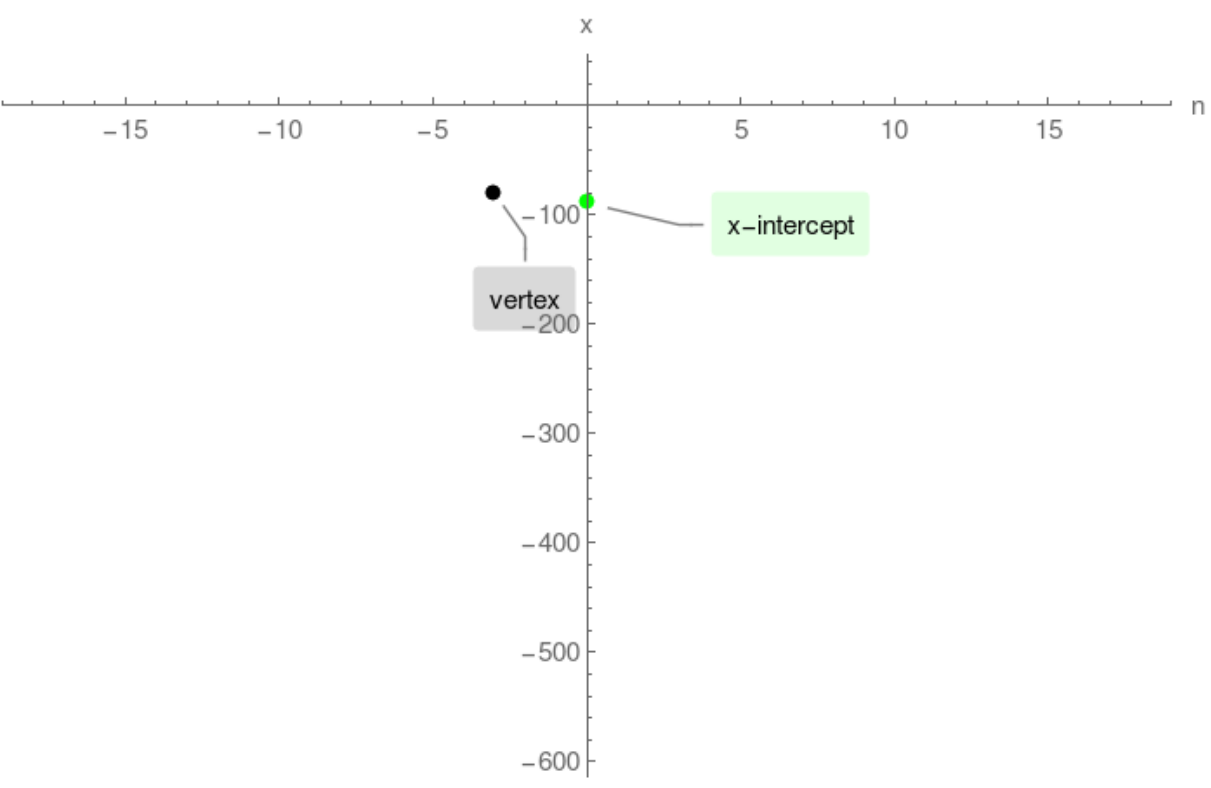
Step 1.

Compute vertex and plot single point:
vertex$=(-3,-80)$



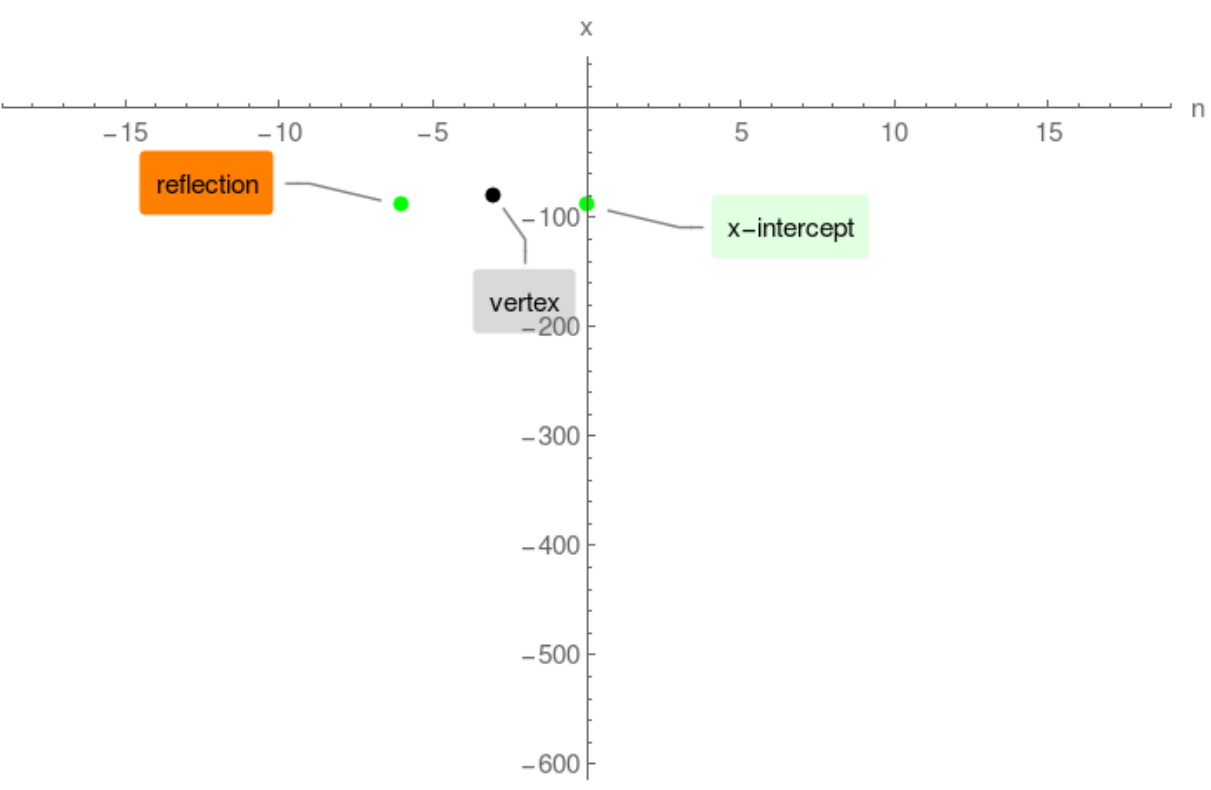
Step 2.

Compute x-intercept and plot single point:
x-intercept$=(0,-89)$



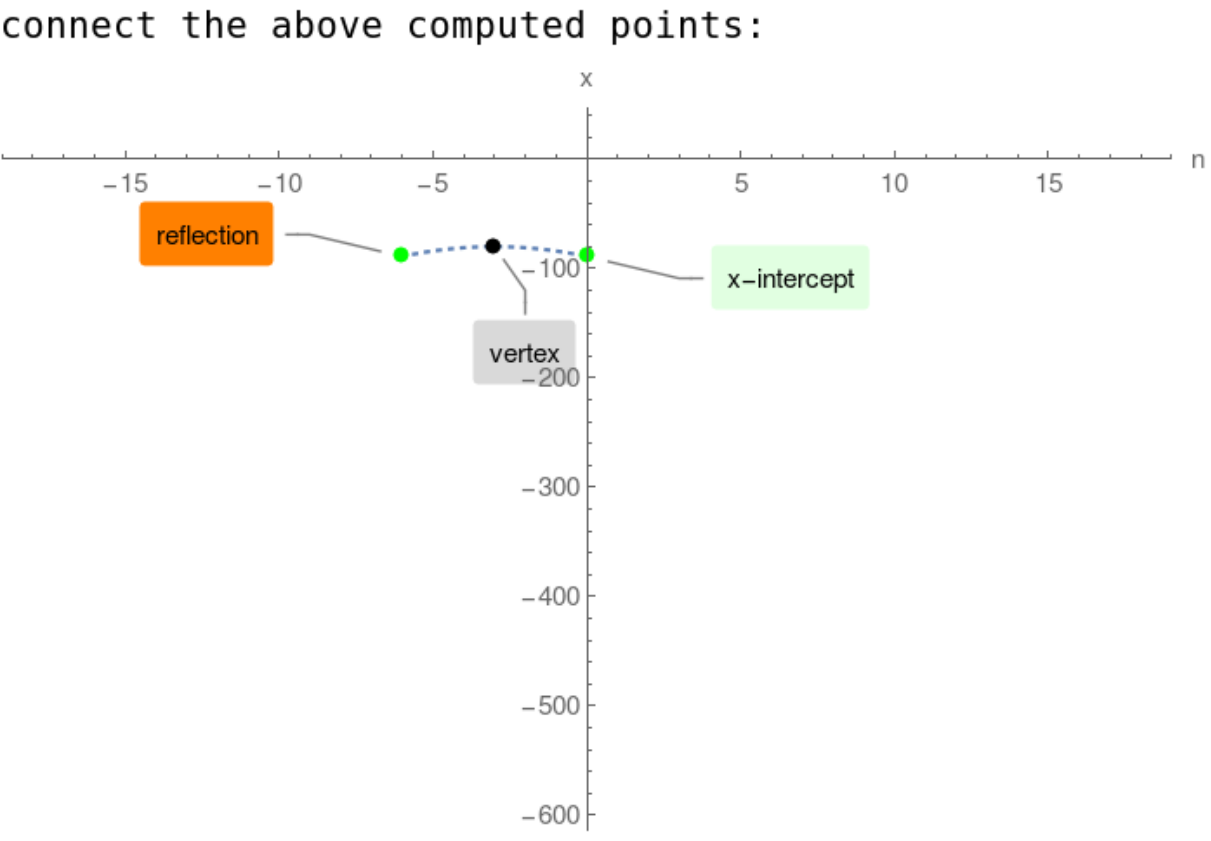
Step 3.

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