

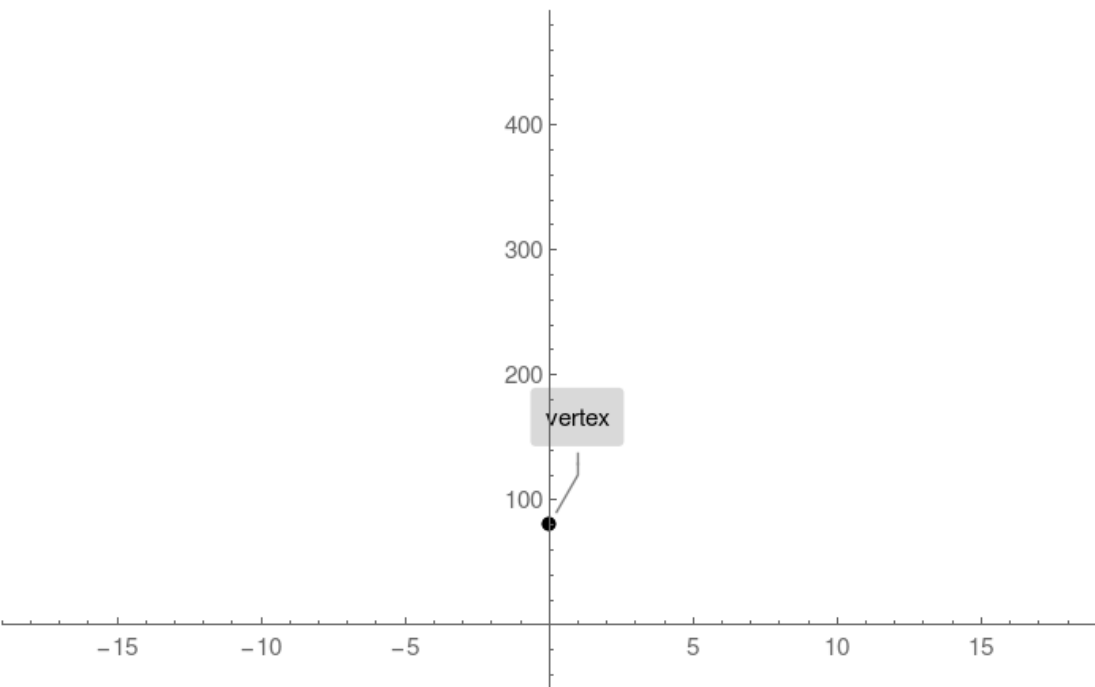
Example 3. Vertex equal to vertical intercept

Plot $e(x) = x^2 + 80$

Step 1.

Compute vertex and plot single point:

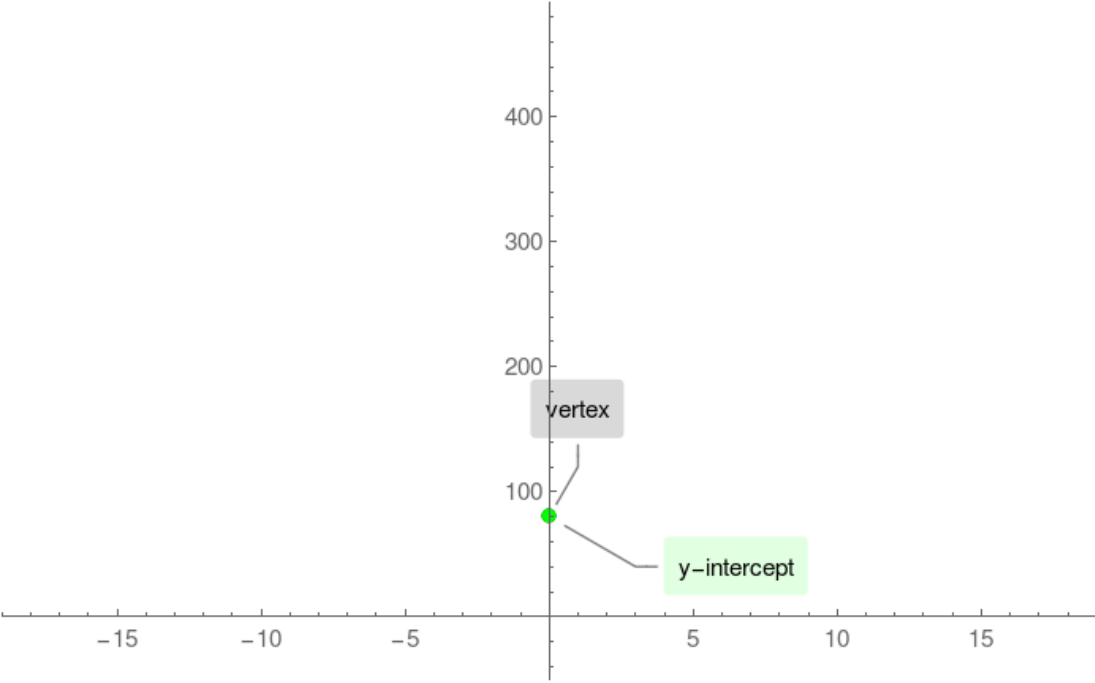
vertex = (0, 80)



Step 2.

Compute e-intercept and plot single point:

e-intercept = (0, 80)

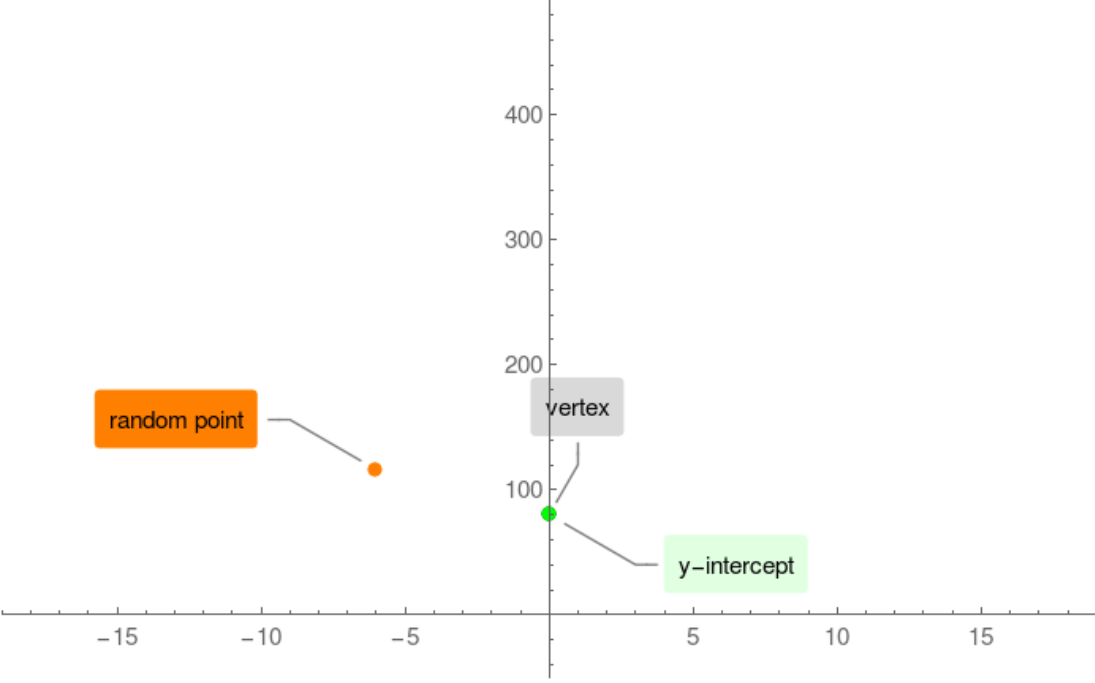


Step 3.

There are no x-intercepts!

Instead compute an arbitrary point on any side of vertex:

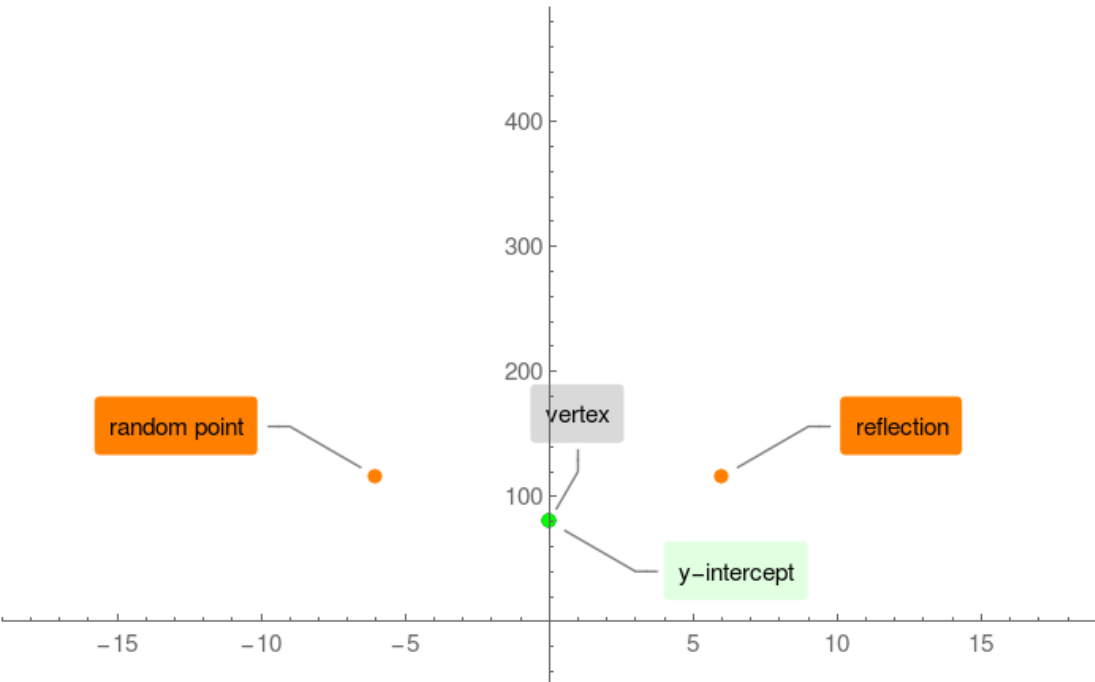
Random point = (-6, 116)



Step 4.

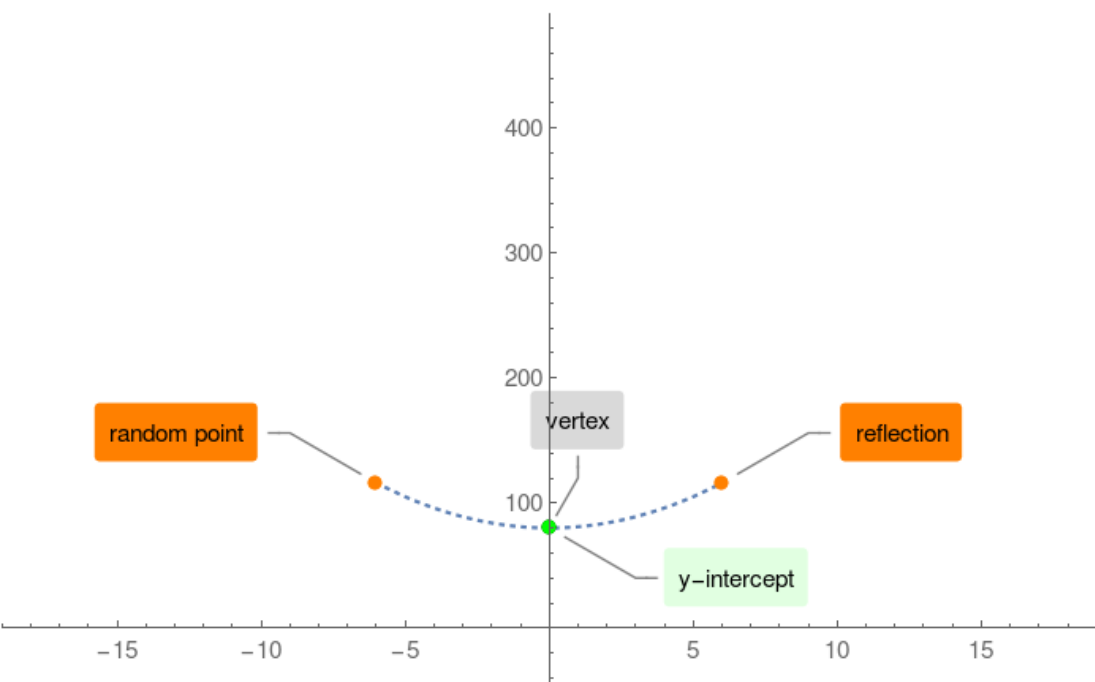
Reflect the point against the vertex's vertical axes:

Reflection = (6, 116)



Step 5.

connect the above computed points:



Step 6.

Extend the parabola beyond the range of intercepts

