

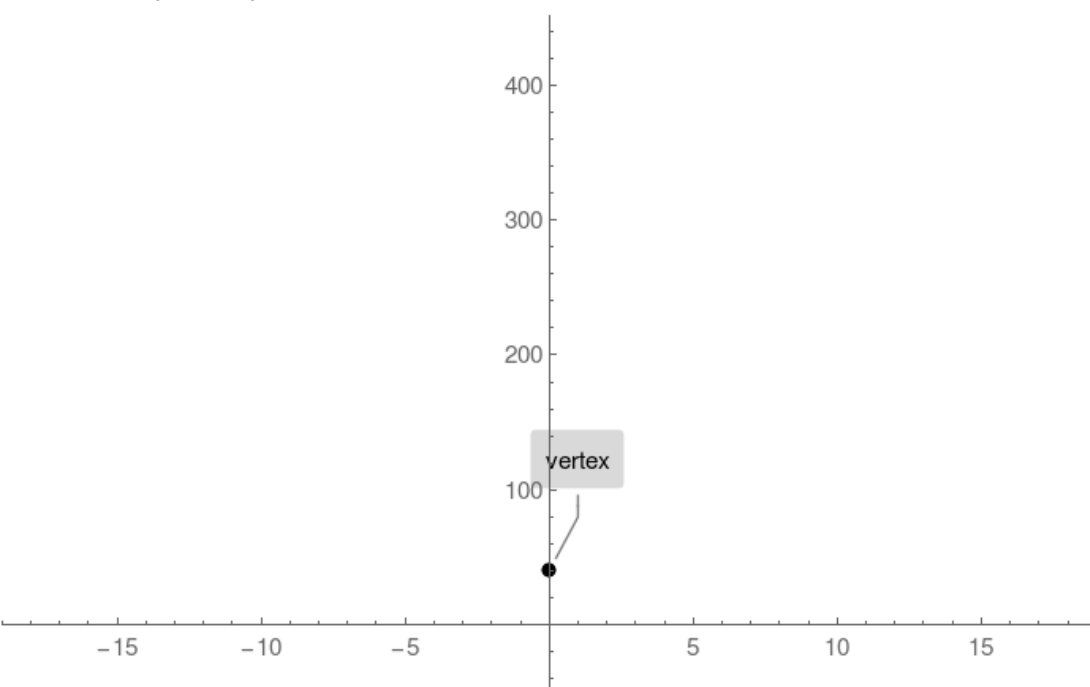
Example 3. Vertex equal to vertical intercept

Plot $h(q) = q^2 + 40$

Step 1.

Compute vertex and plot single point:

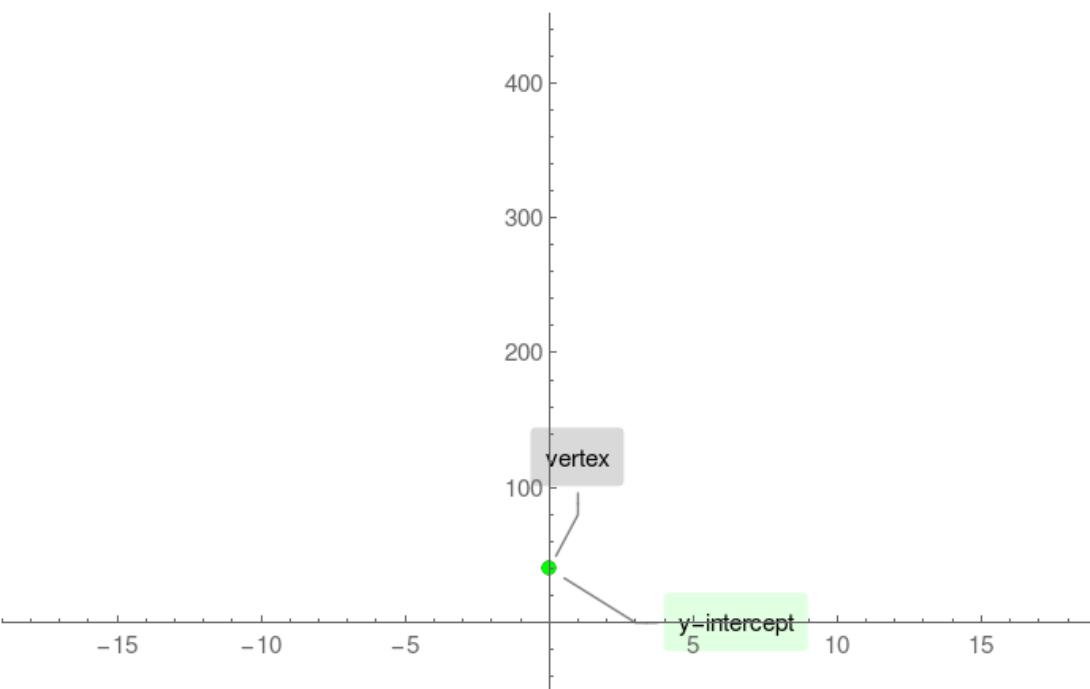
vertex = (0, 40)



Step 2.

Compute h-intercept and plot single point:

h-intercept = (0, 40)

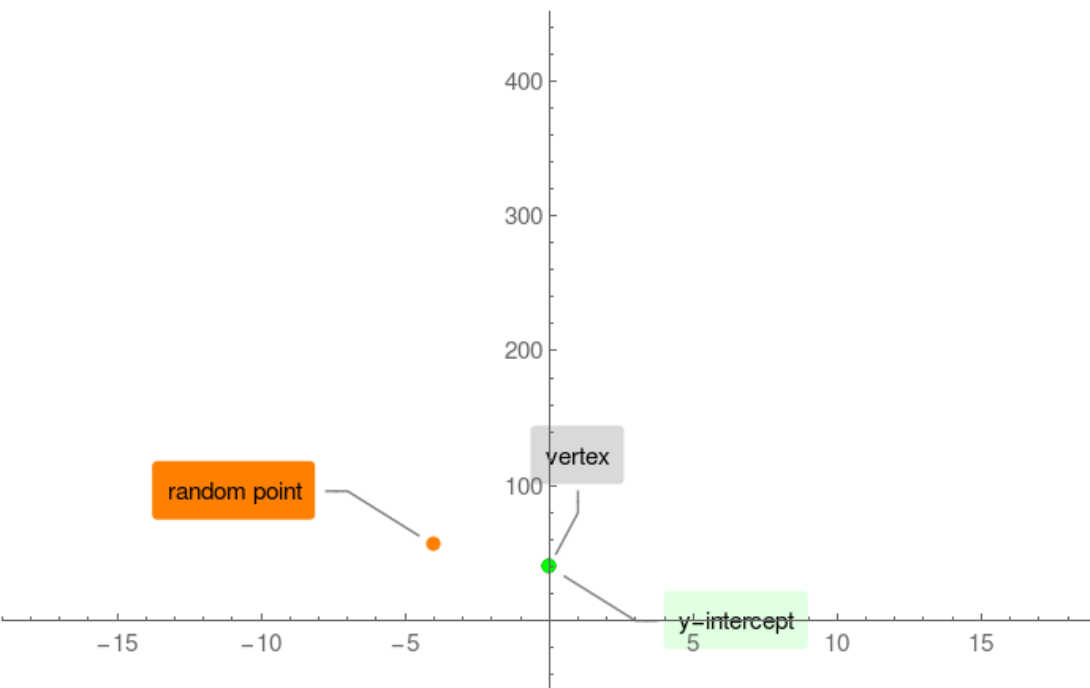


Step 3.

There are no q-intercepts!

Instead compute an arbitrary point on any side of vertex:

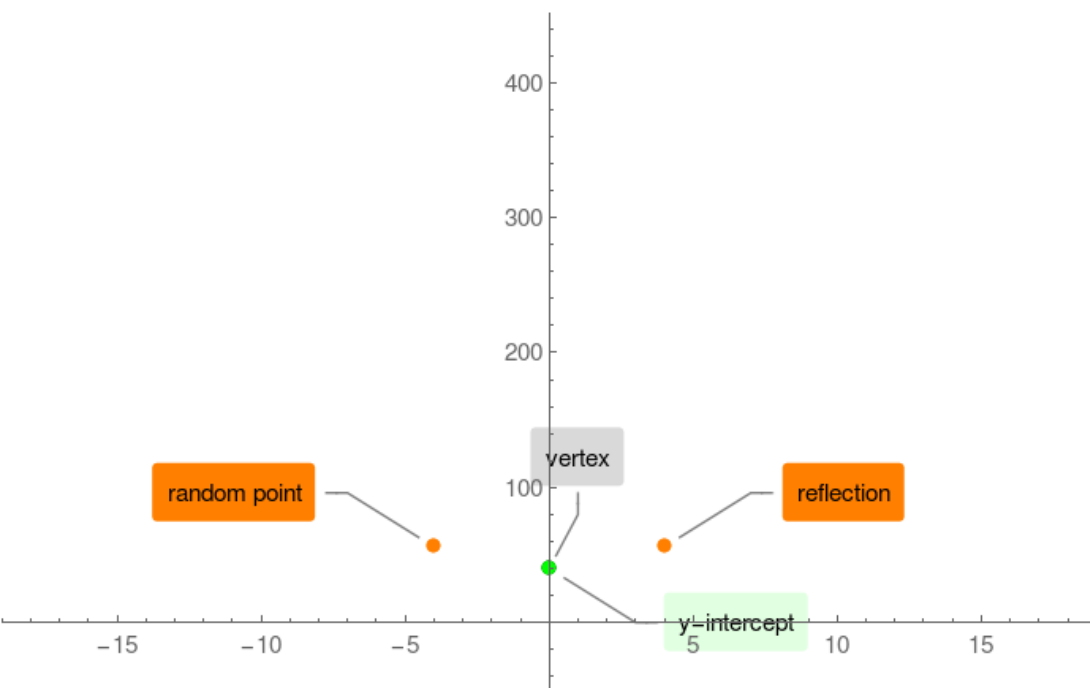
Random point = (-4, 56)



Step 4.

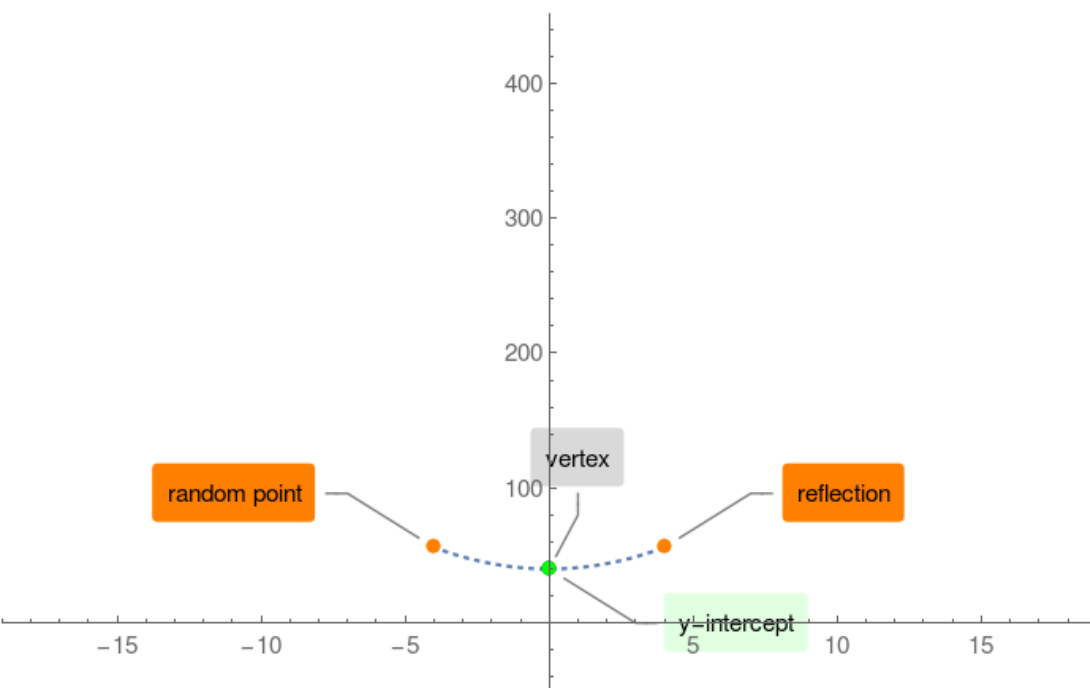
Reflect the point against the vertex's vertical axes:

Reflection = (4, 56)



Step 5.

connect the above computed points:



Step 6.

Extend the parabola beyond the range of intercepts

