

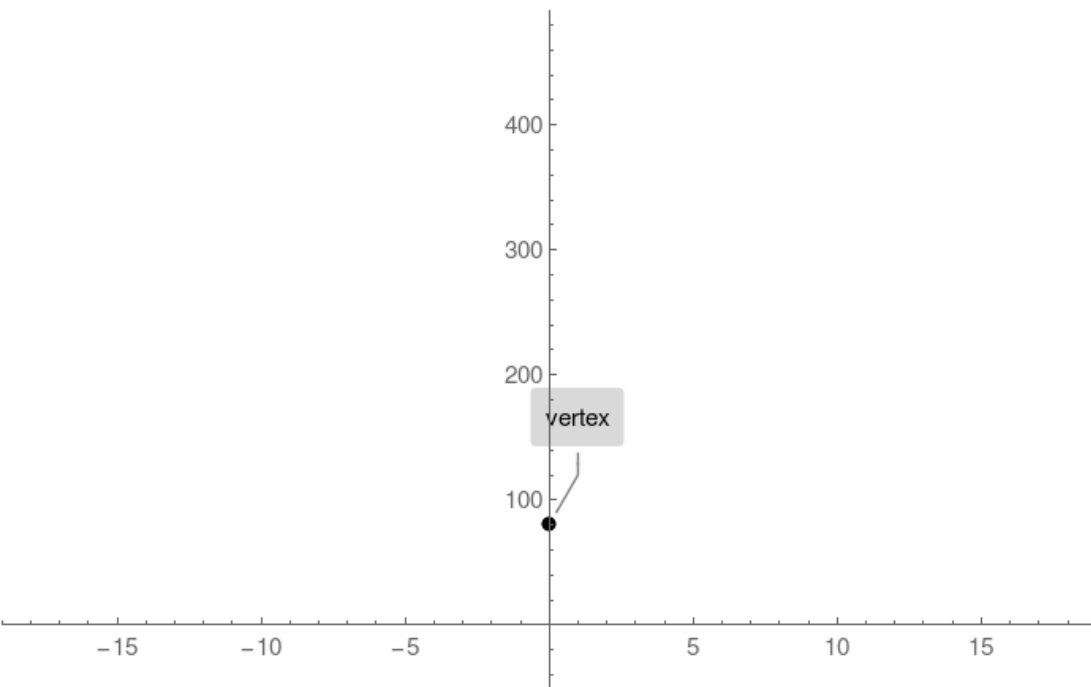
Example 3. Vertex equal to vertical intercept

Plot $v(k) = k^2 + 80$

Step 1.

Compute vertex and plot single point:

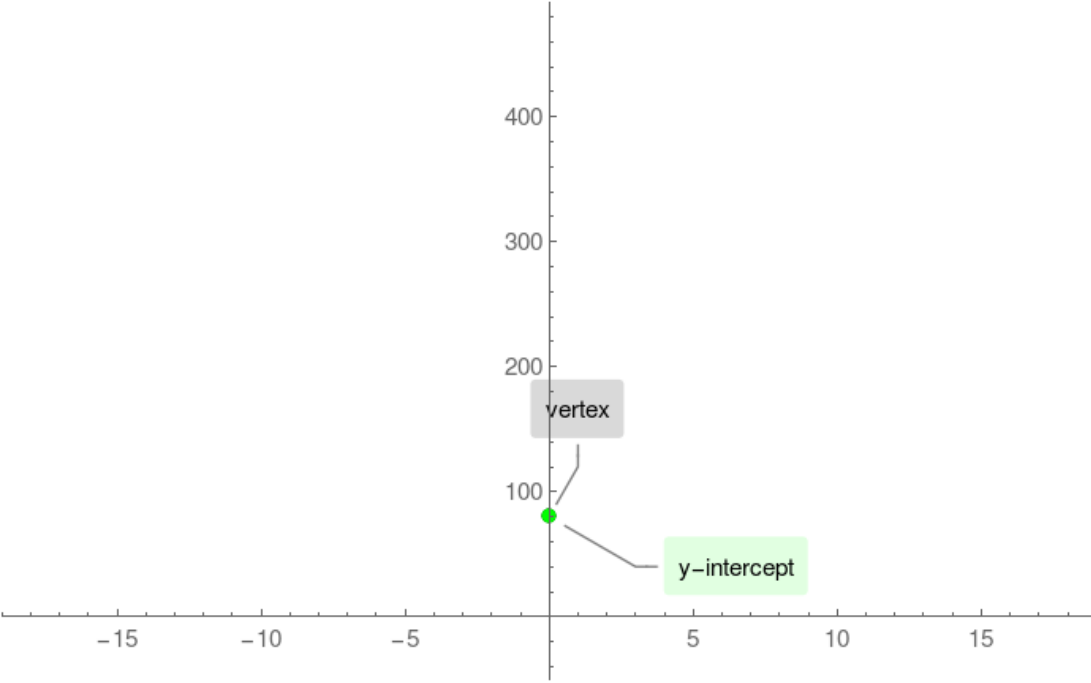
vertex = (0, 80)



Step 2.

Compute v-intercept and plot single point:

v-intercept = (0, 80)

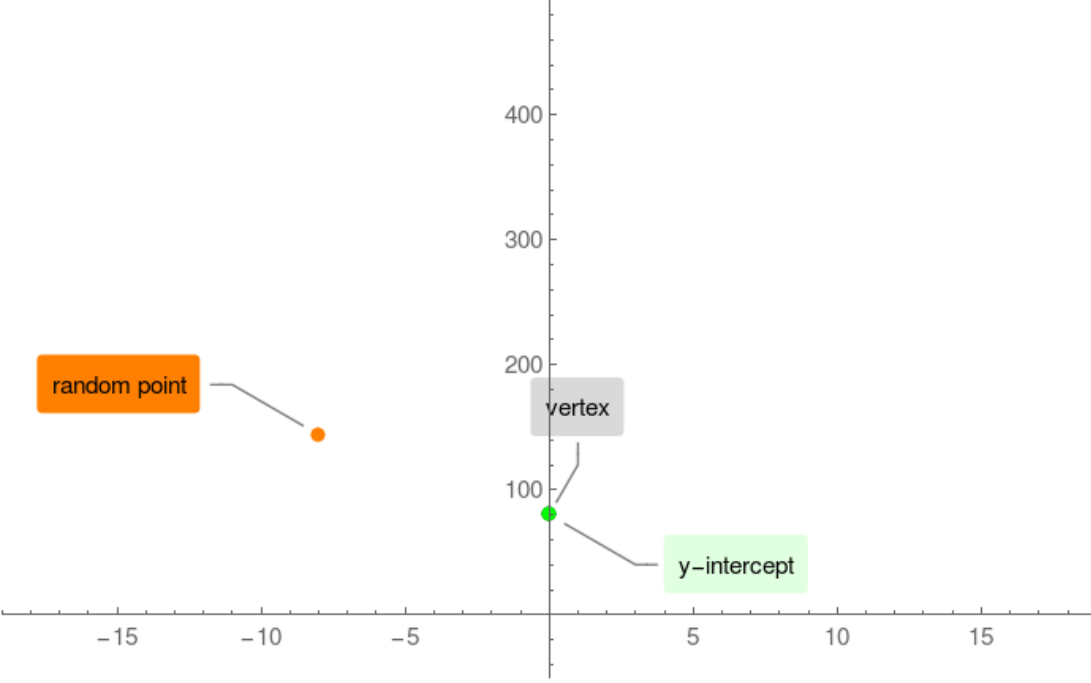


Step 3.

There are no k-intercepts!

Instead compute an arbitrary point on any side of vertex:

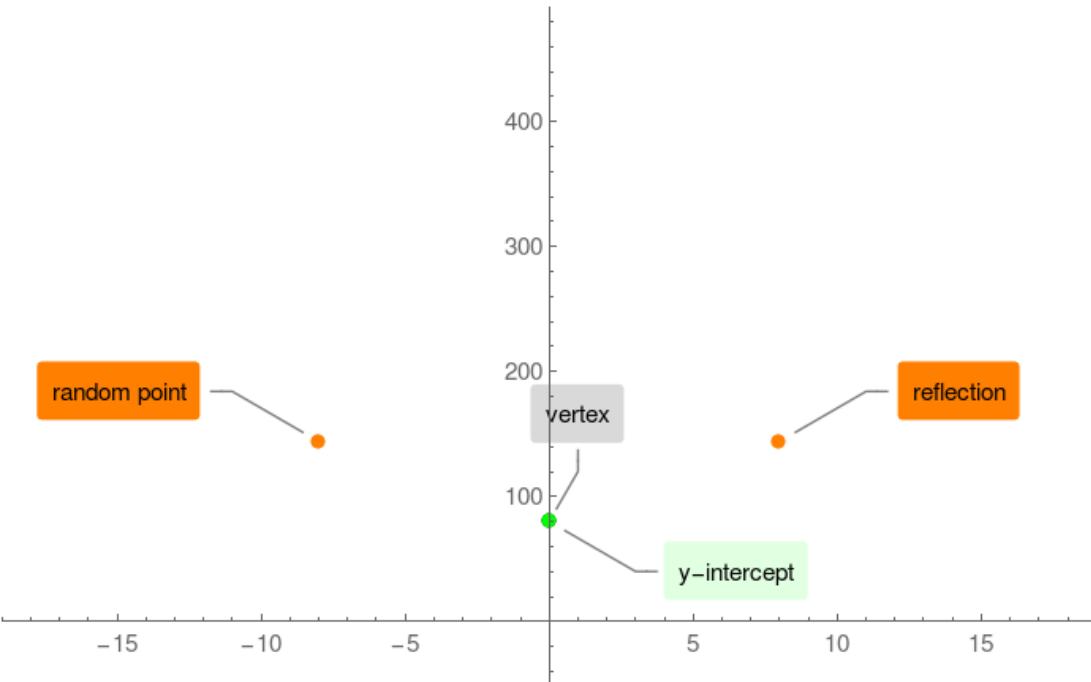
Random point = (-8, 144)



Step 4.

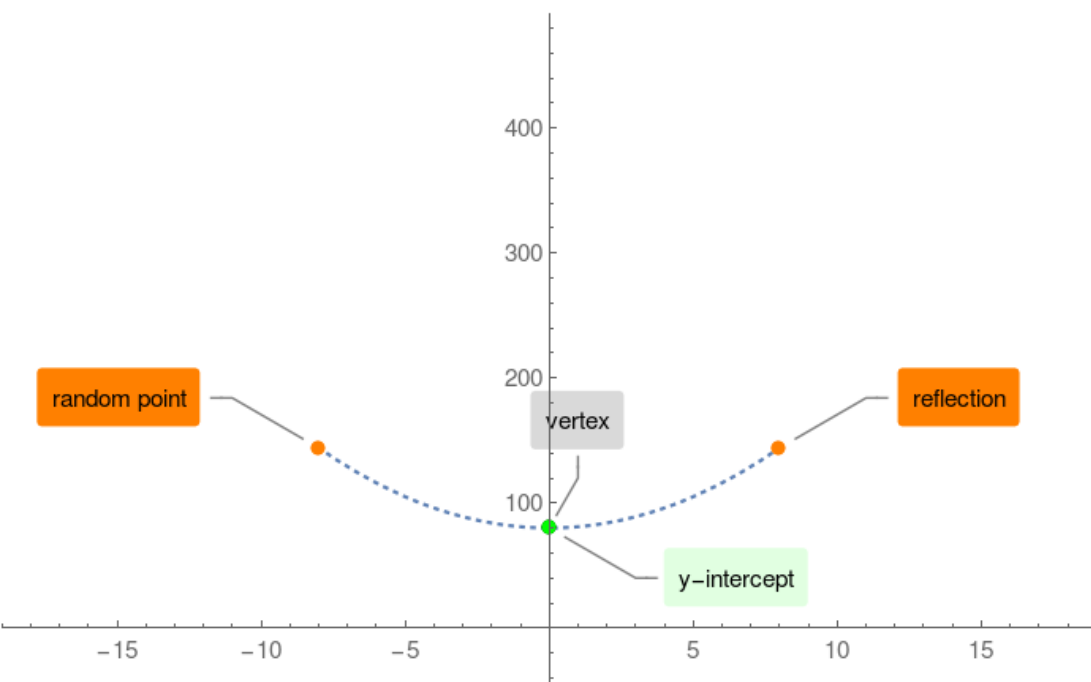
Reflect the point against the vertex's vertical axes:

Reflection = (8, 144)



Step 5.

connect the above computed points:



Step 6.

Extend the parabola beyond the range of intercepts

