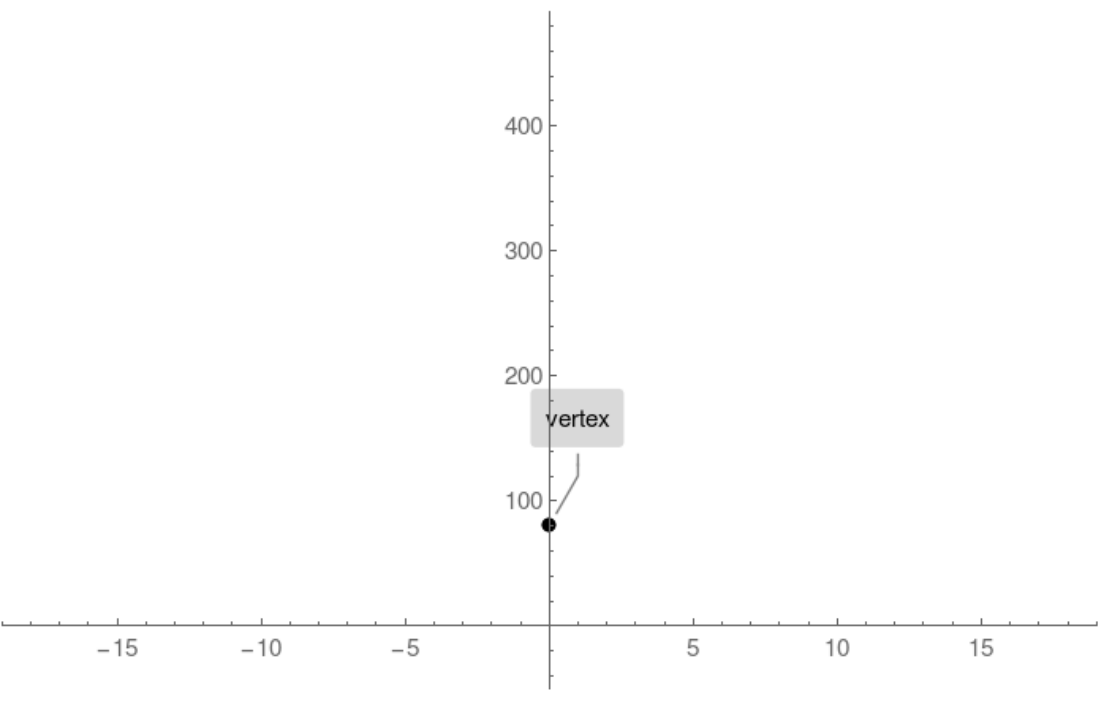
Example 3. Vertex equal to vertical intercept

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

Step 1.

Compute vertex and plot single point:

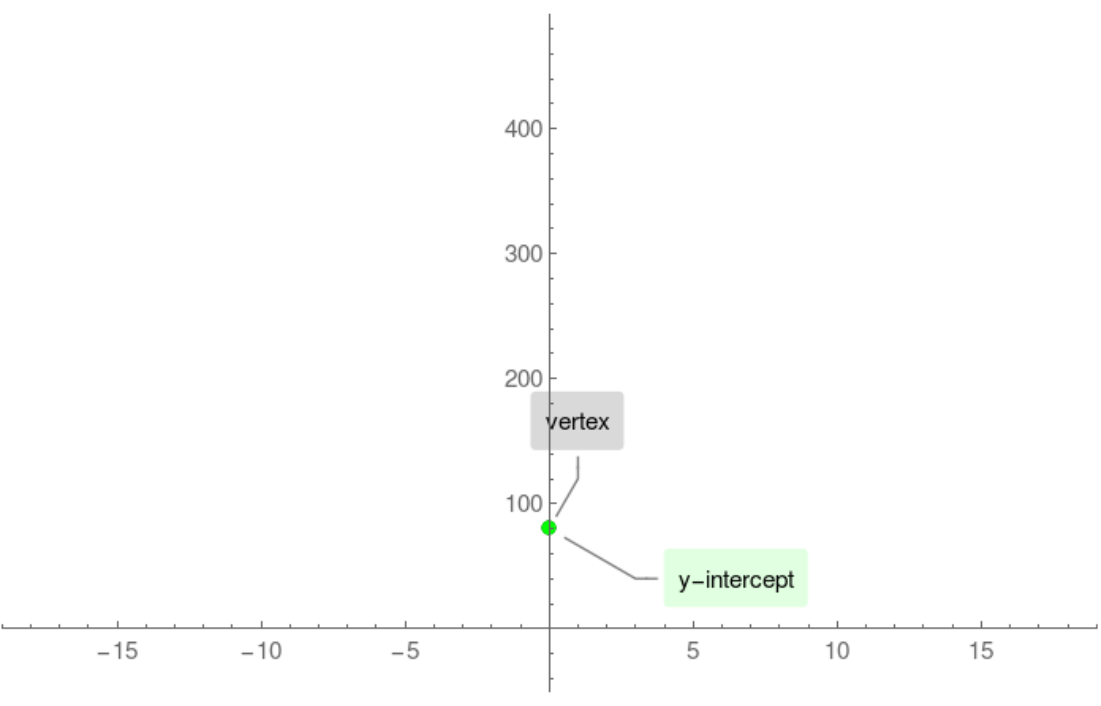
vertex$=(0,80)$



Step 2.

Compute v−intercept and plot single point:

v−intercept$=(0,80)$

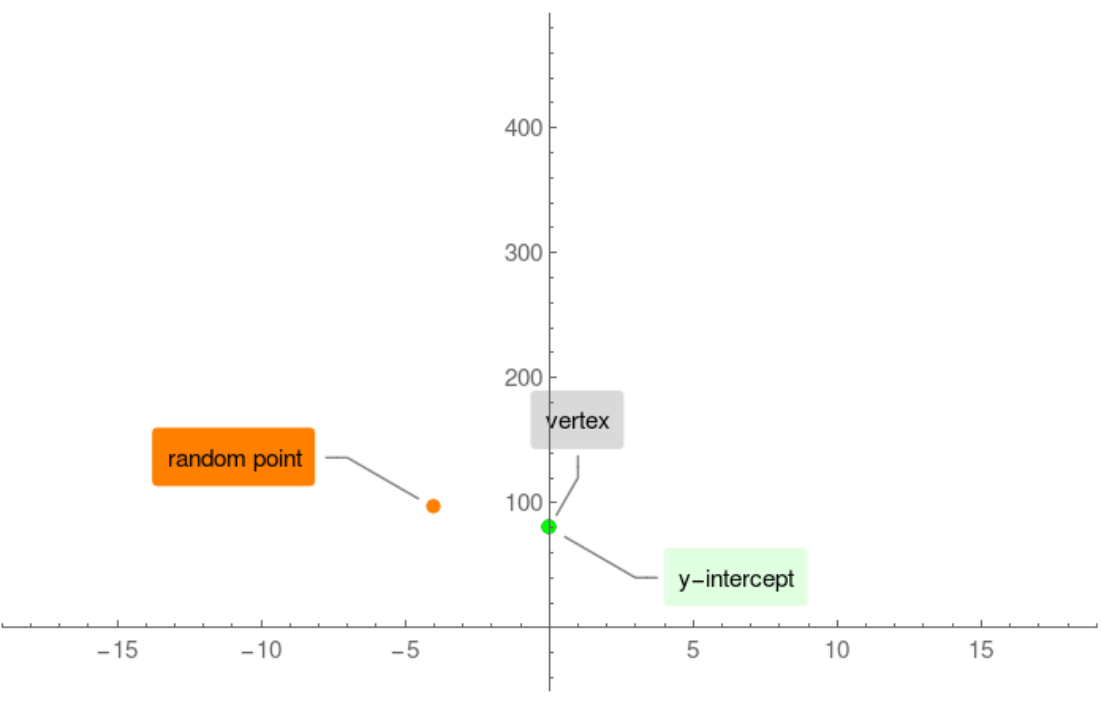


Step 3.

There are no d−intercepts!

Instead compute an arbitrary point on any side of vertex:

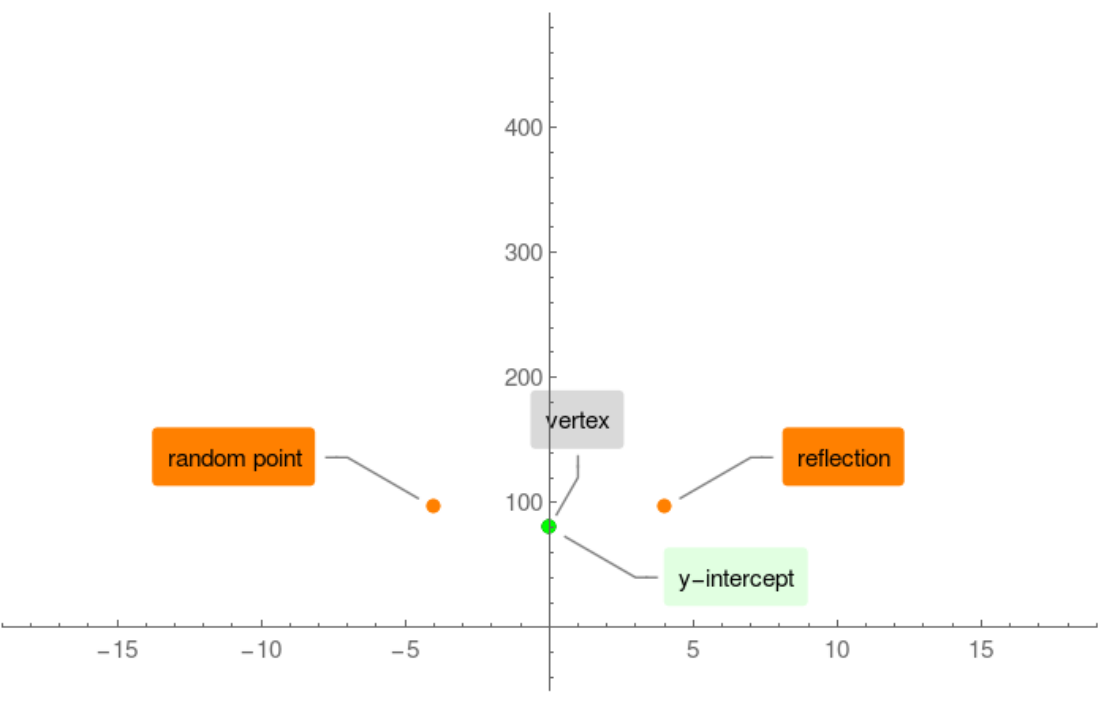
Random point$=(-4,96)$



Step 4.

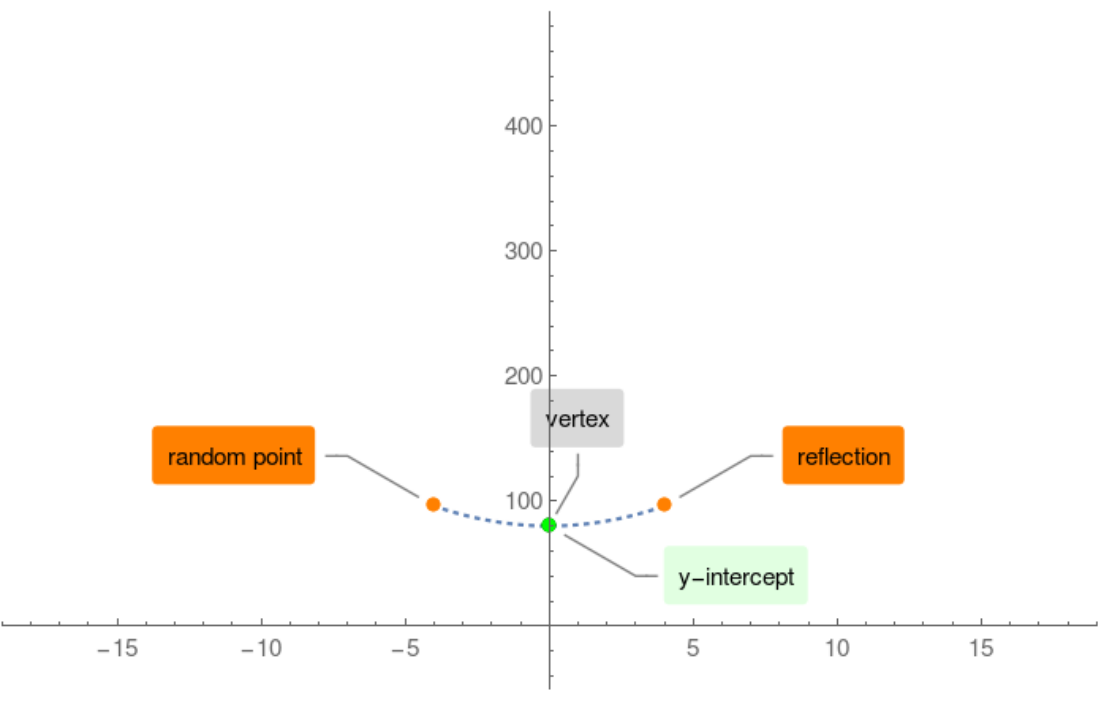
Reflect the point against the vertex's vertical axes:

Reflection $=(4,96)$



Step 5.

connect the above computed points:



Step 6.

Extend the parabola beyond the range of intercepts