

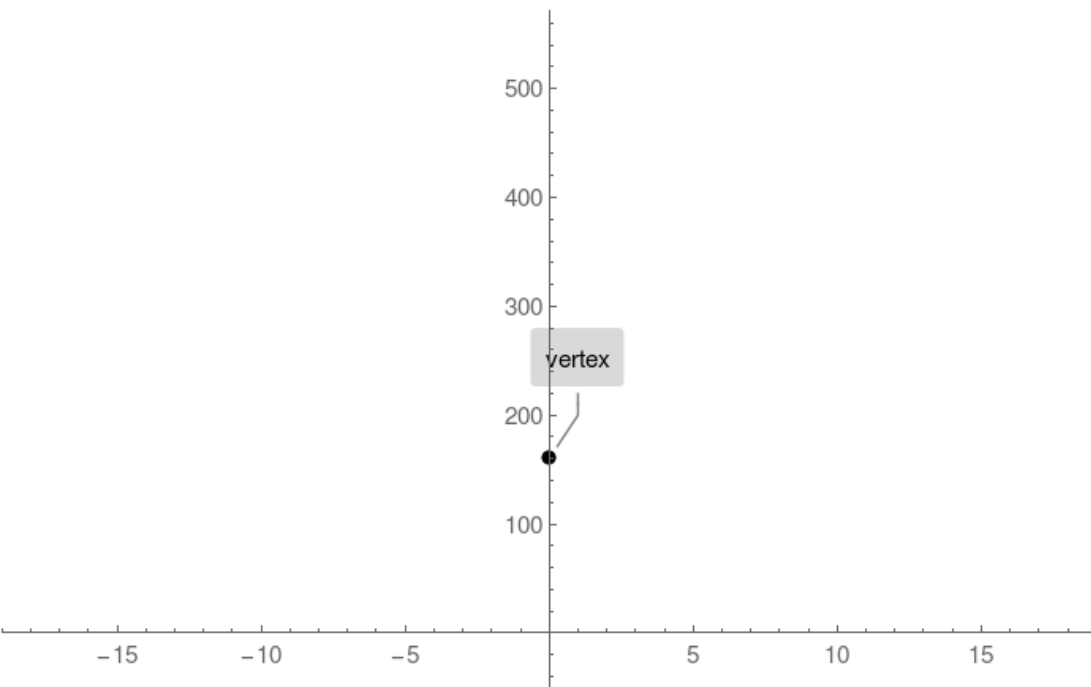
Example 3. Vertex equal to vertical intercept

Plot $q(u) = u^2 + 160$

Step 1.

Compute vertex and plot single point:

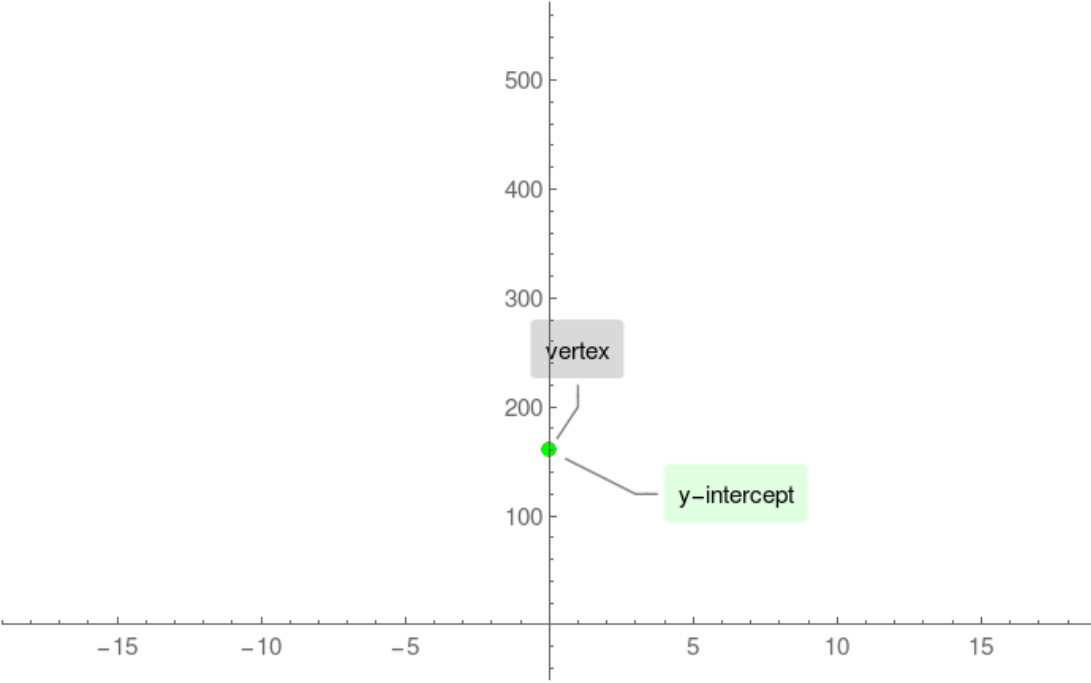
vertex = (0, 160)



Step 2.

Compute q-intercept and plot single point:

q-intercept = (0, 160)

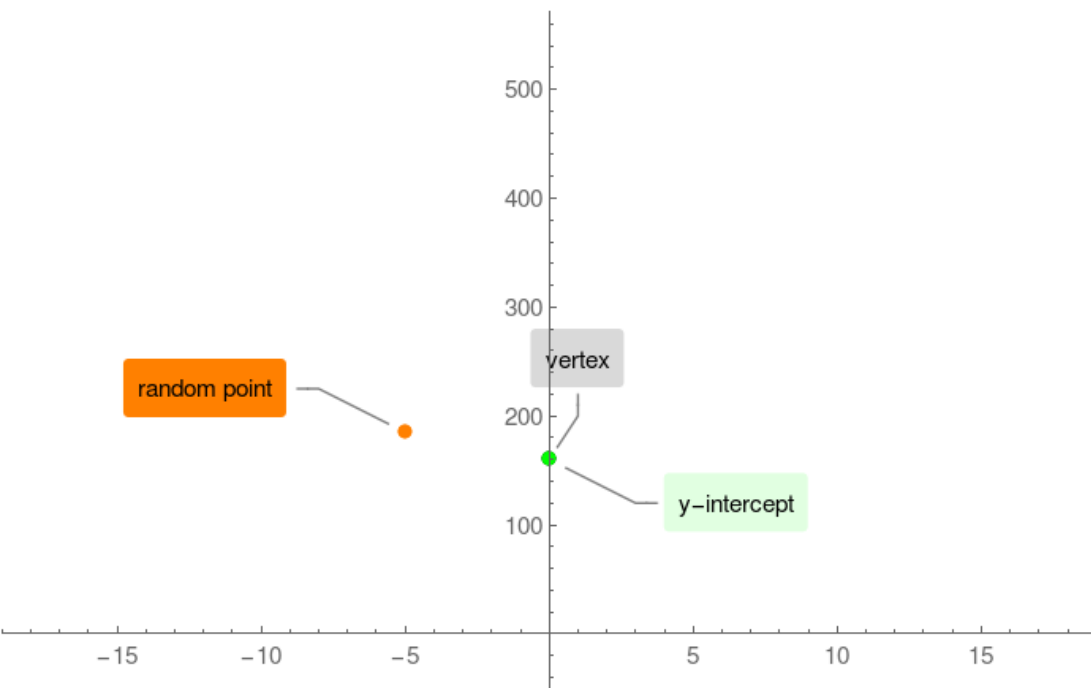


Step 3.

There are no u-intercepts!

Instead compute an arbitrary point on any side of vertex:

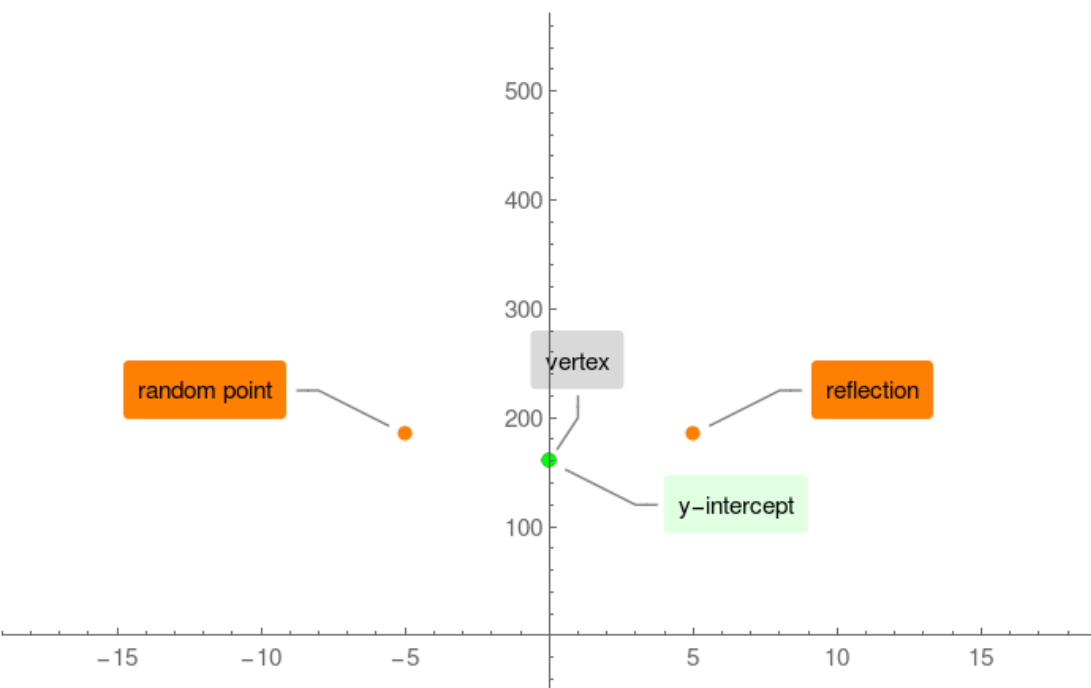
Random point = (-5, 185)



Step 4.

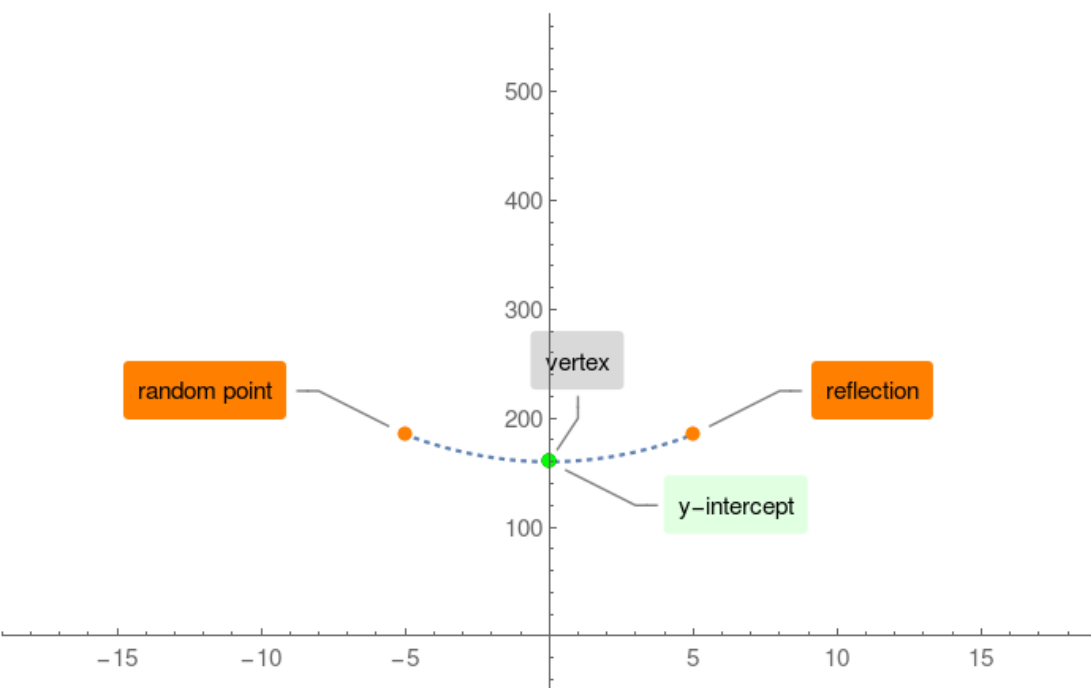
Reflect the point against the vertex's vertical axes:

Reflection = (5, 185)



Step 5.

connect the above computed points:



Step 6.

Extend the parabola beyond the range of intercepts

