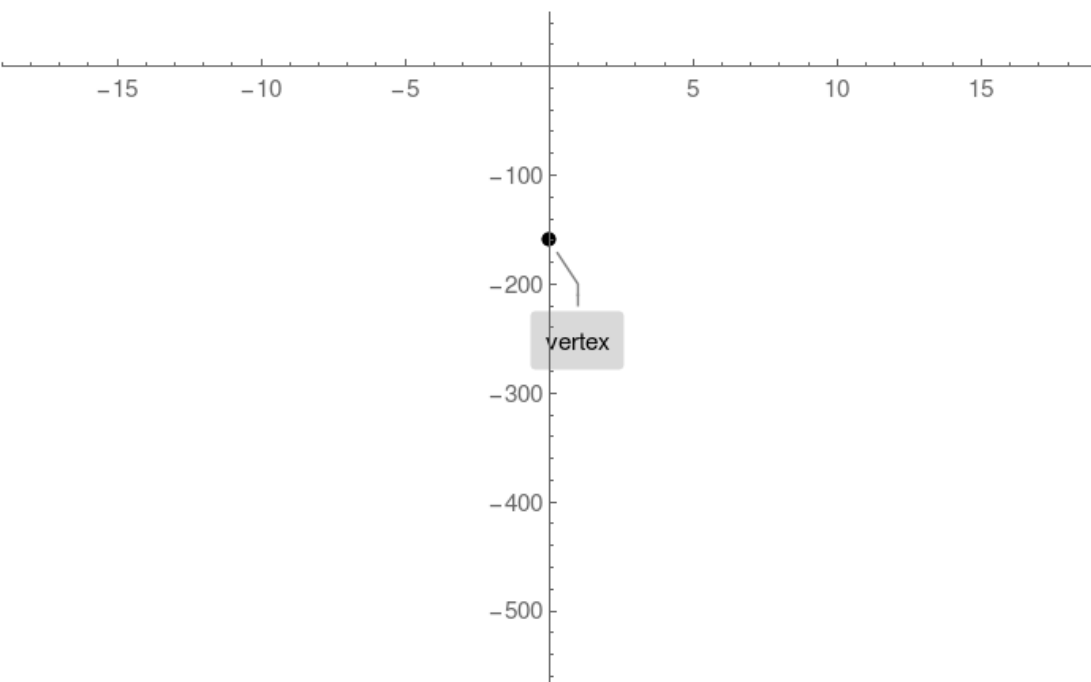# Example 3. Vertex equal to vertical intercept

Plot $w(y) = -y^2 - 160$

Step 1.
Compute vertex and plot single point:
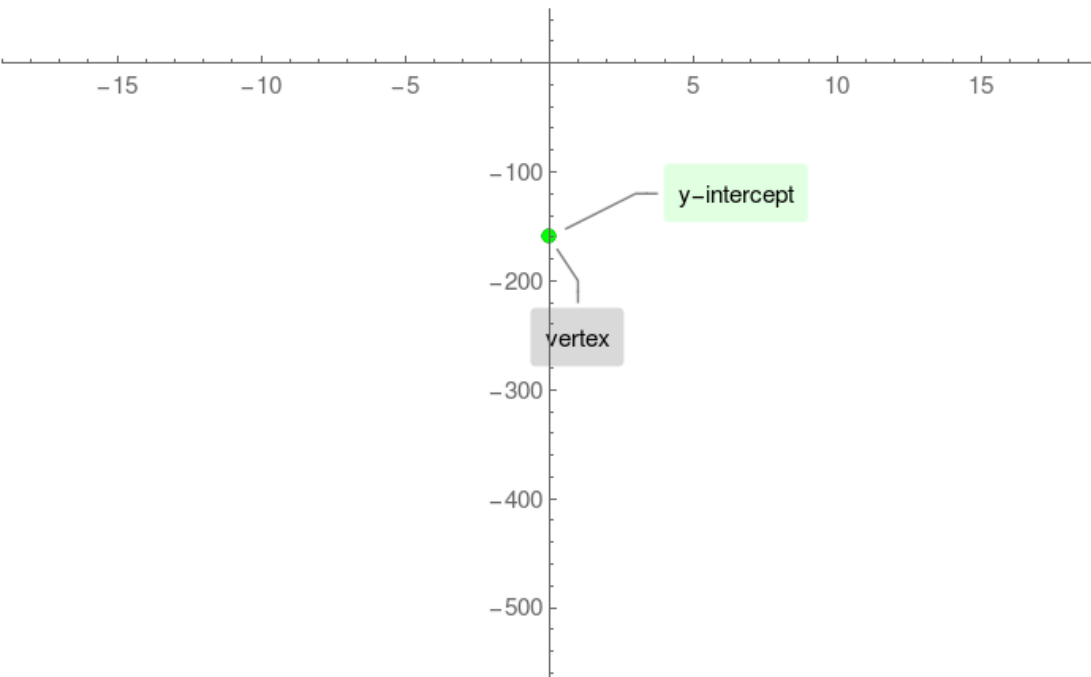vertex = $(0, -160)$

Step 2.
Compute w-intercept and plot single point:
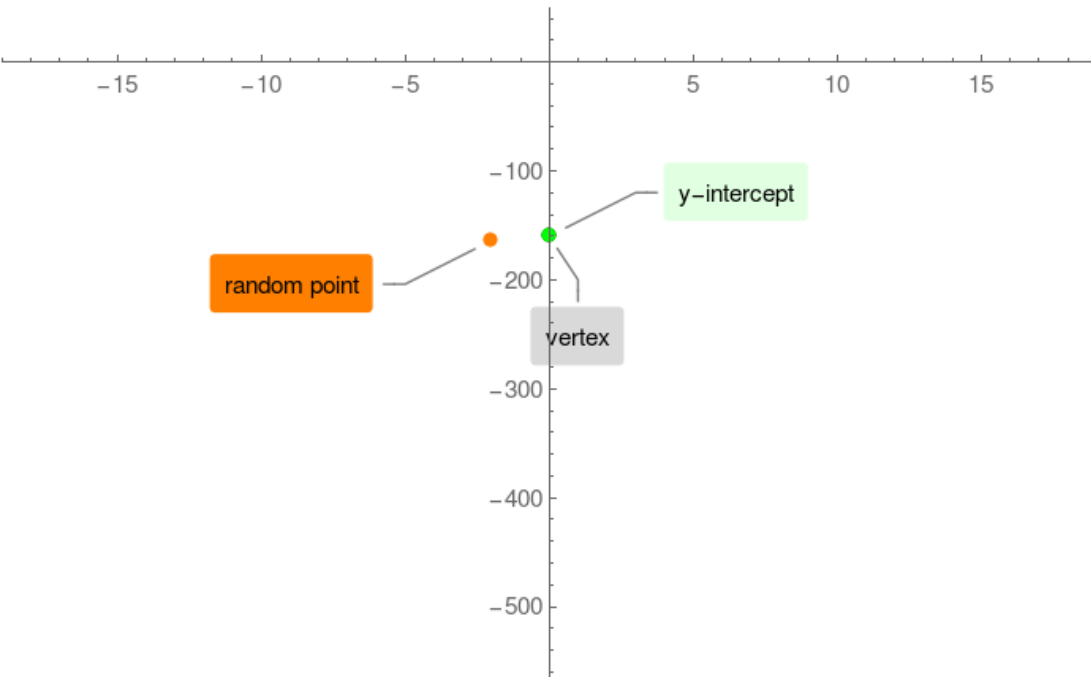w-intercept = $(0, -160)$

Step 3.
There are no y-intercepts!
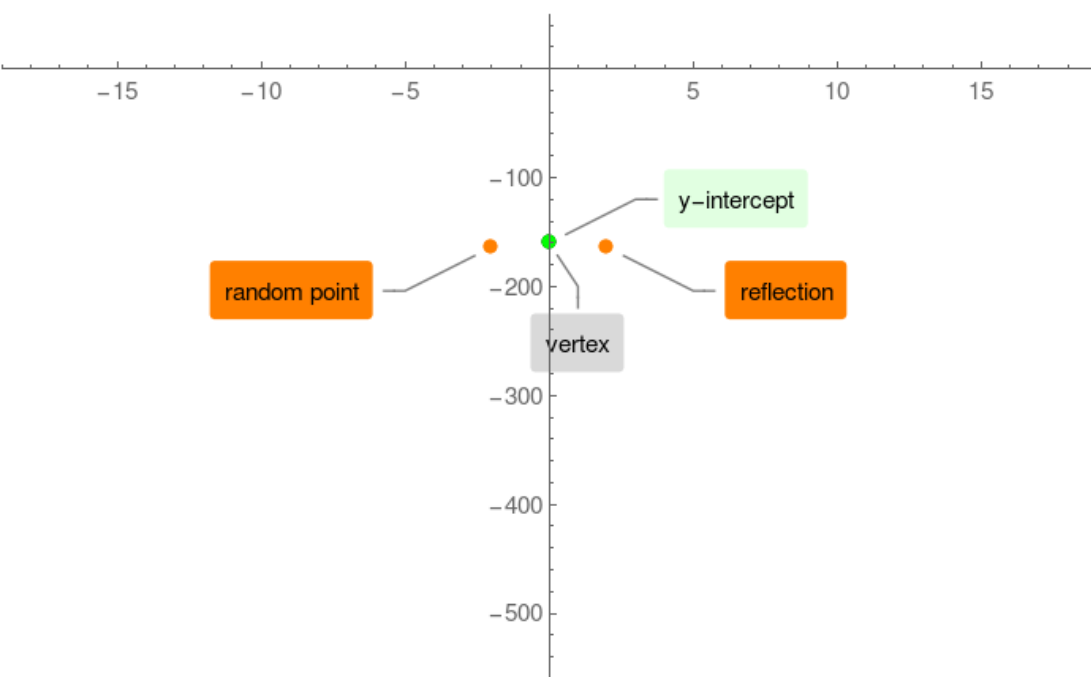Instead compute an arbitrary point on any side of vertex:
Random point = $(-2, -164)$

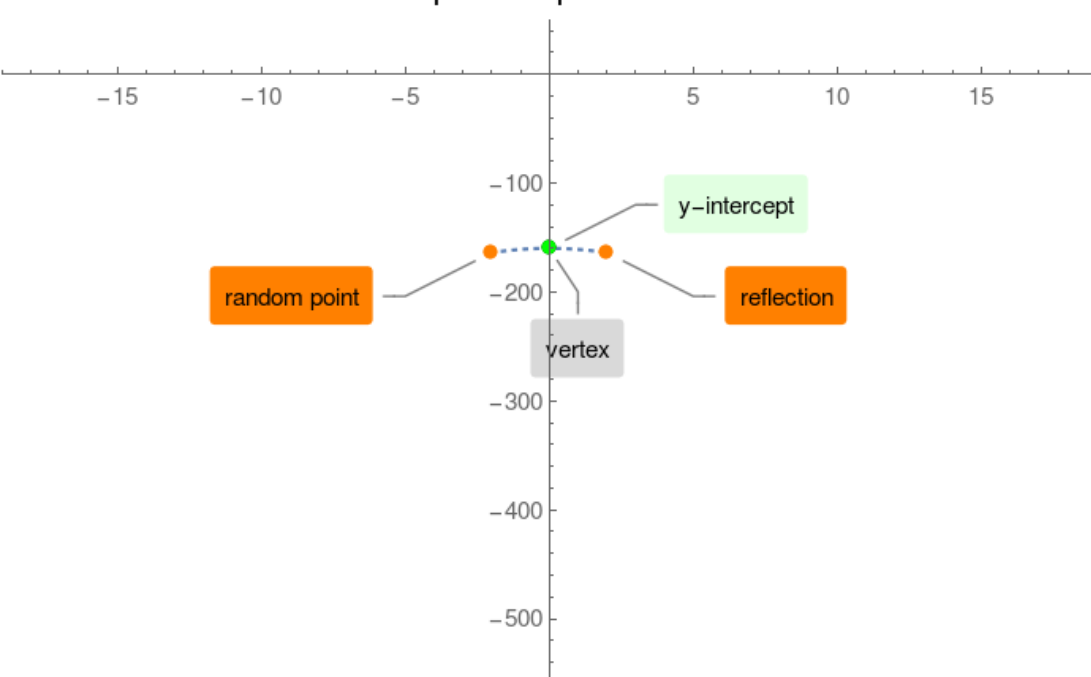

Step 4.
Reflect the point against the vertex's vertical axes:
Reflection = $(2, -164)$

Step 5.
connect the above computed points:

Step 6.
Extend the parabola beyond the range of intercepts