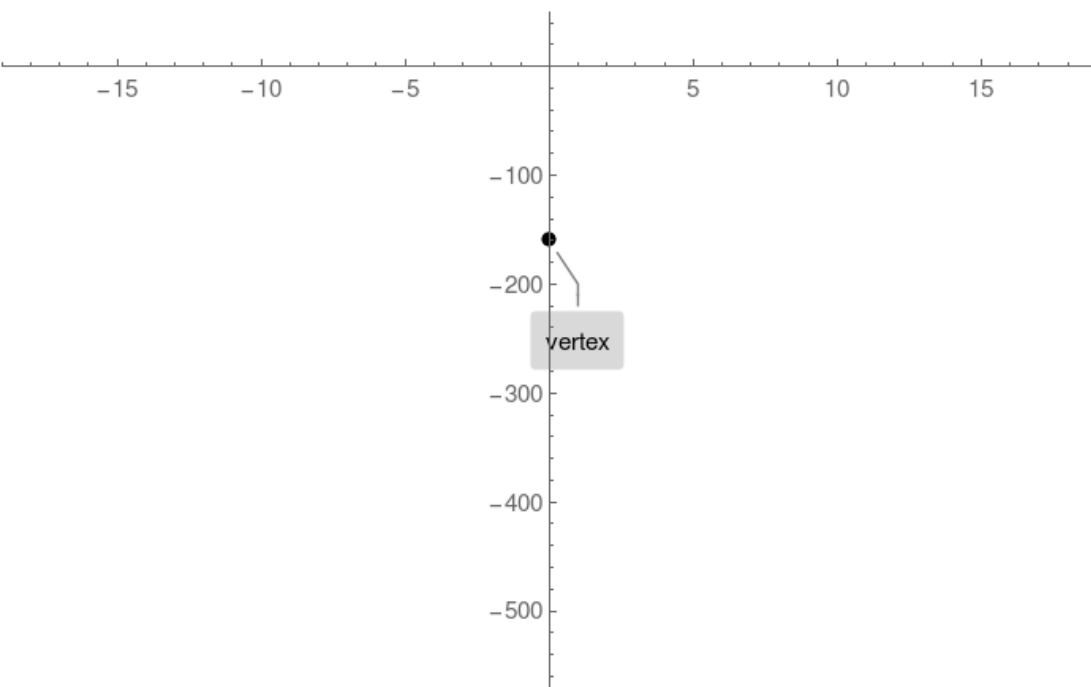# Example 3. Vertex equal to vertical intercept

Plot $m(u) = -u^2 - 160$

Step 1.

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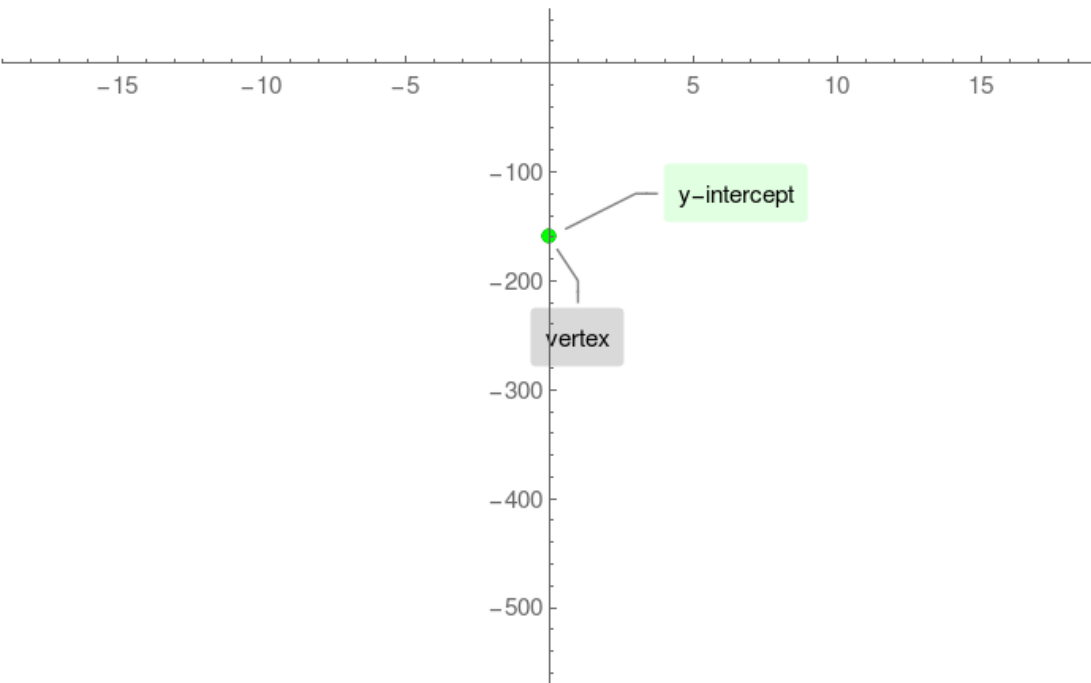
vertex = $(0, -160)$

Step 2.

Compute m-intercept and plot single point:

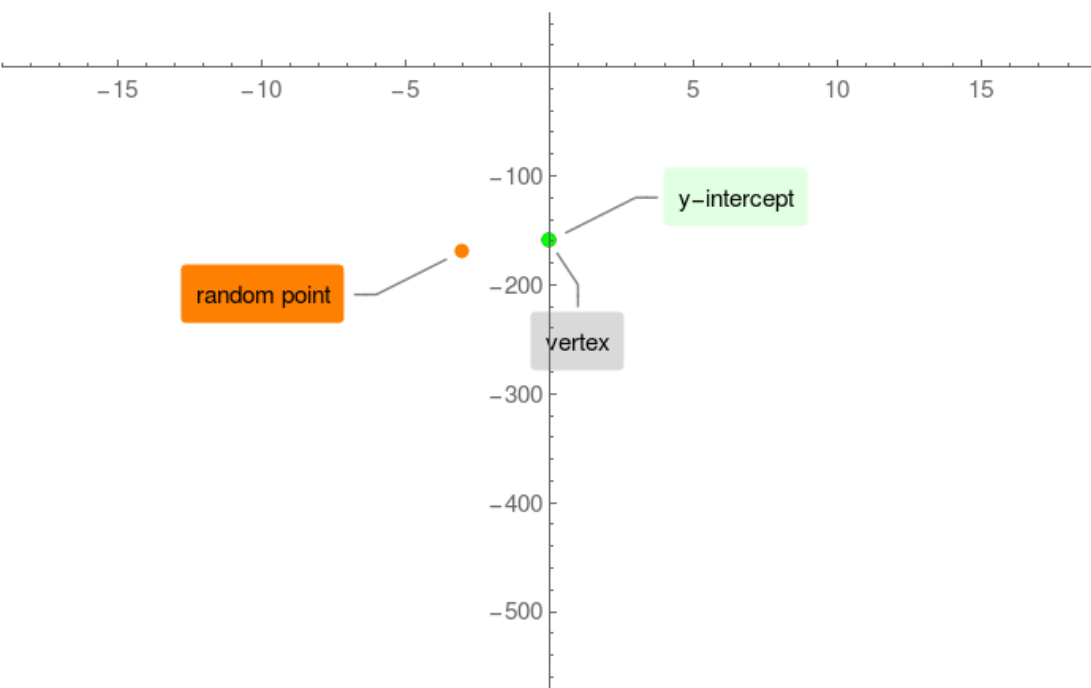m-intercept = $(0, -160)$

Step 3.

There are no u-intercepts!
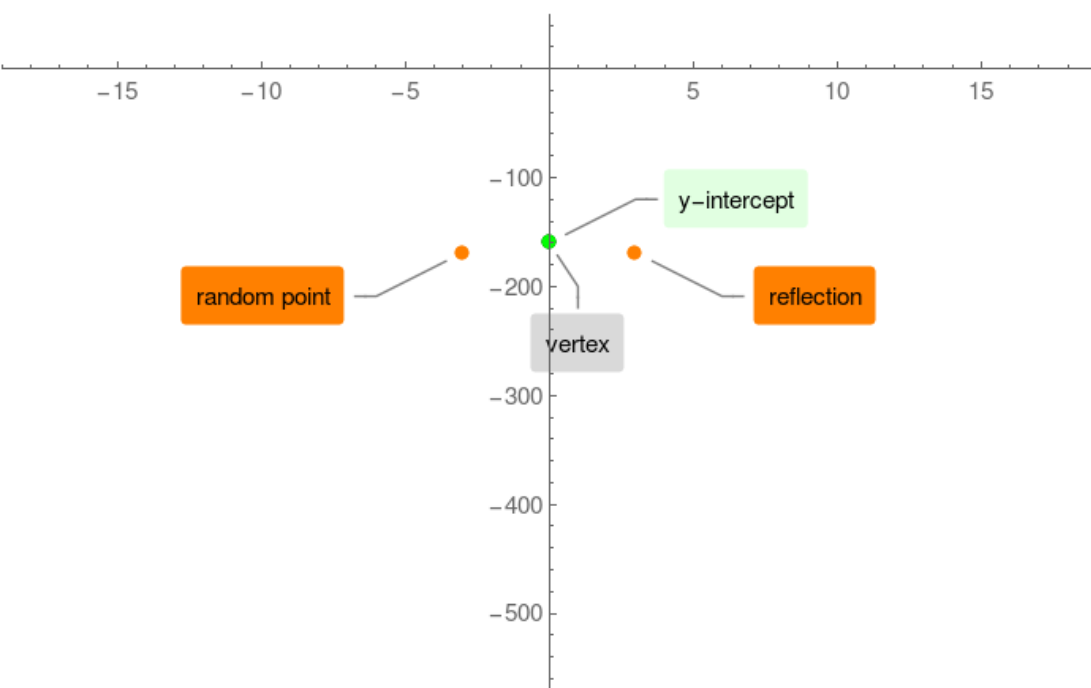Instead compute an arbitrary point on any side of vertex:

Random point = $(-3, -169)$
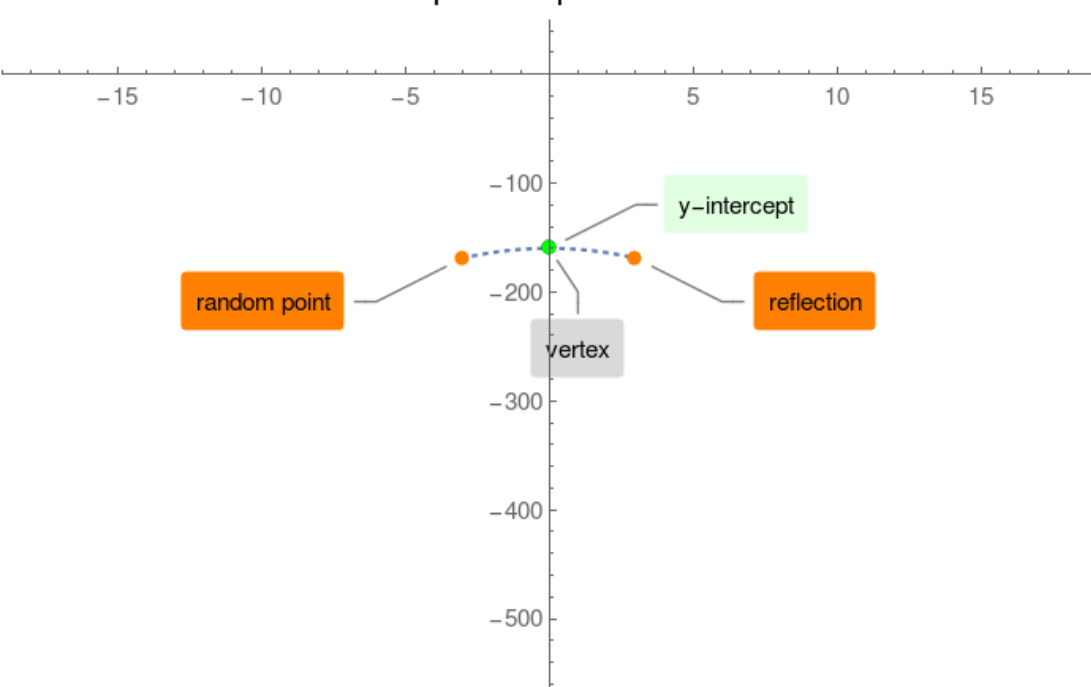

Step 4.

Reflect the point against the vertex's vertical axes:

Reflection = $(3, -169)$

Step 5.

connect the above computed points:

Step 6.

Extend the parabola beyond the range of intercepts