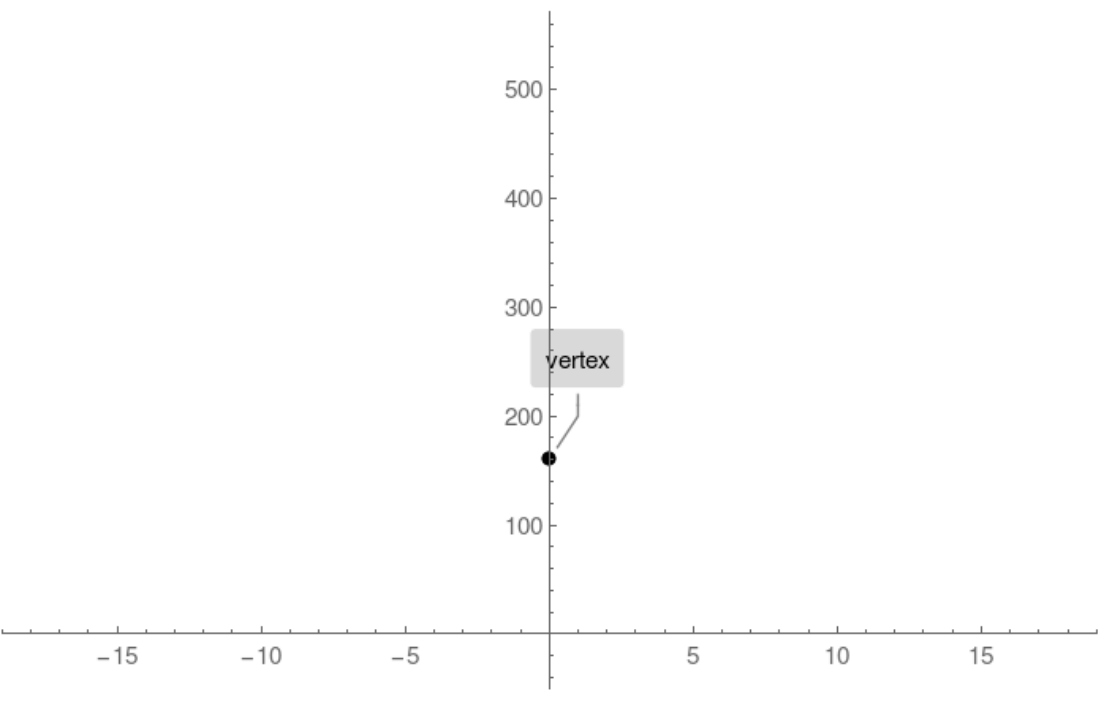
# Example 3. Vertex equal to vertical intercept

Plot $z(h) = h^2 + 160$

## Step 1.

Compute vertex and plot single point:

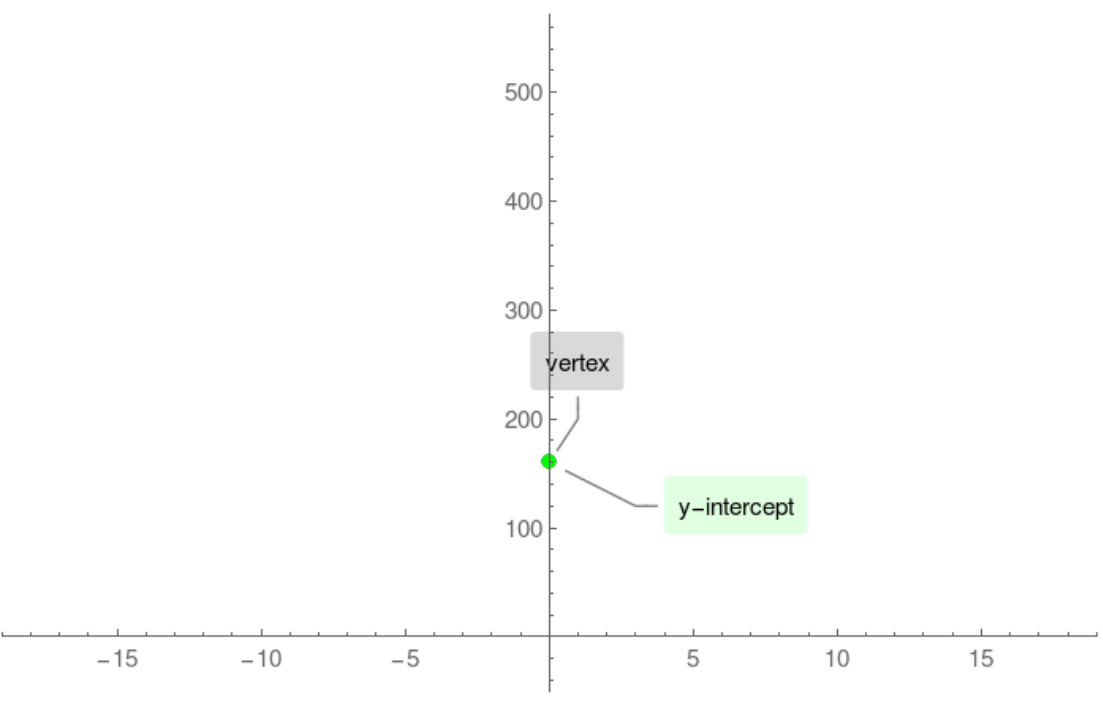
vertex = (0,160)




## Step 2.

Compute z-intercept and plot single point:

z-intercept = (0,160)

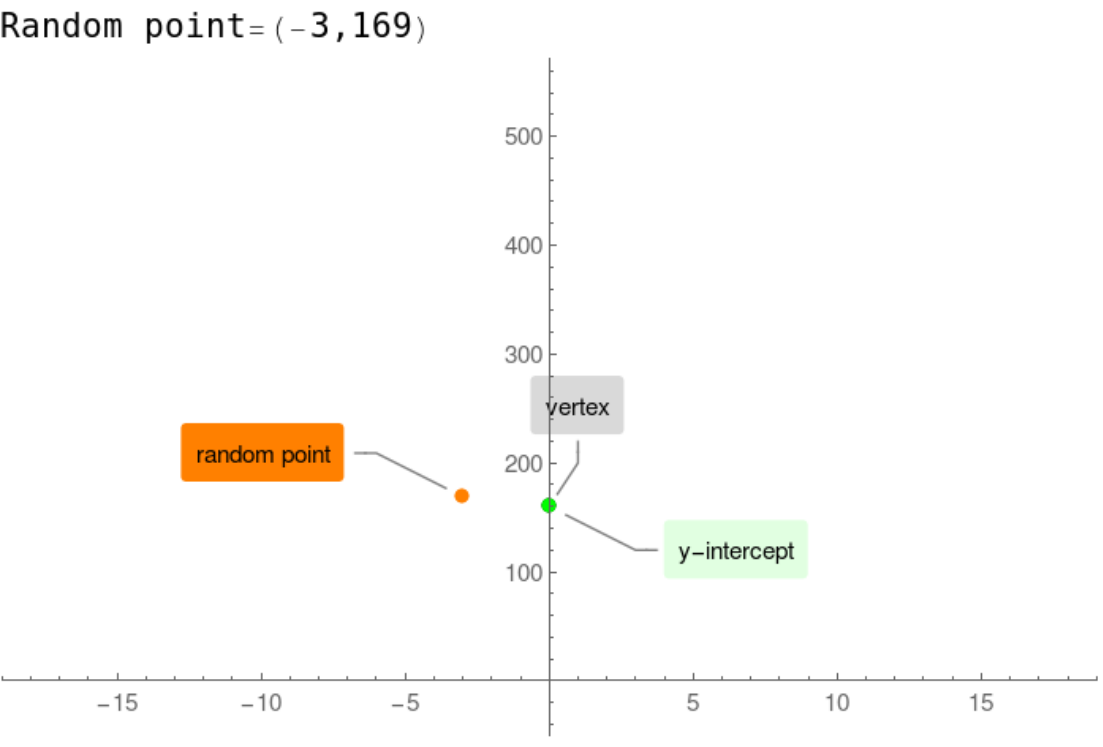



## Step 3.

There are no h-intercepts!

Instead compute an arbitrary point on any side of vertex:

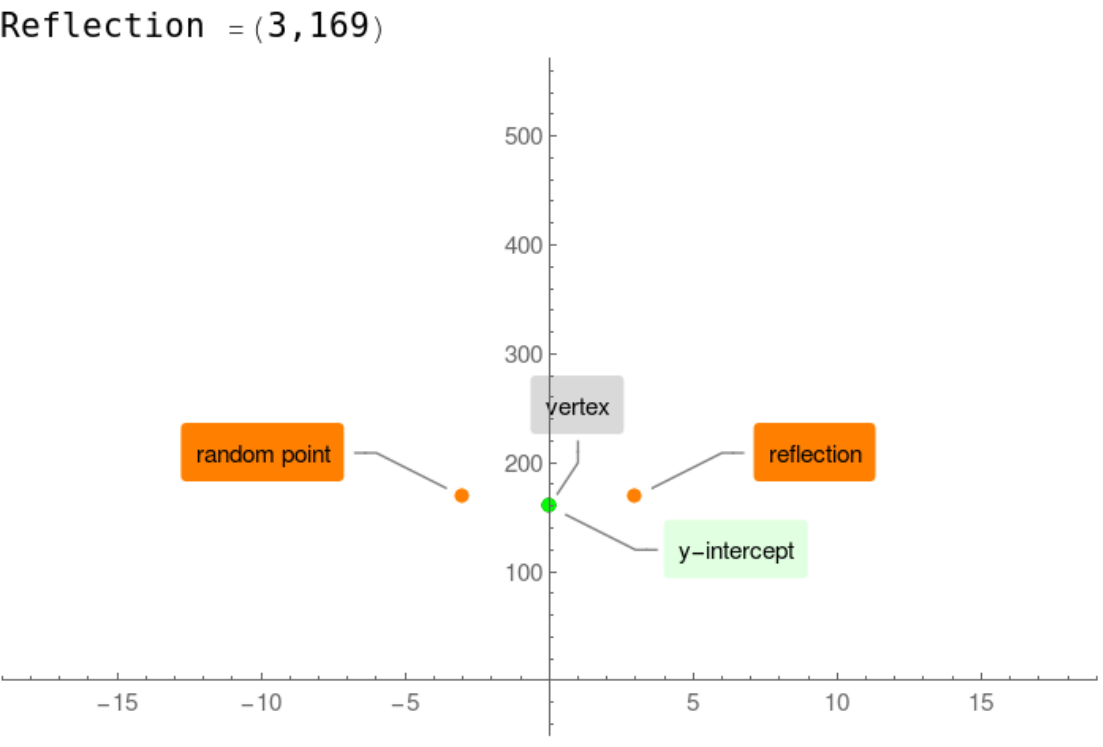
Random point = (−3,169)




## Step 4.

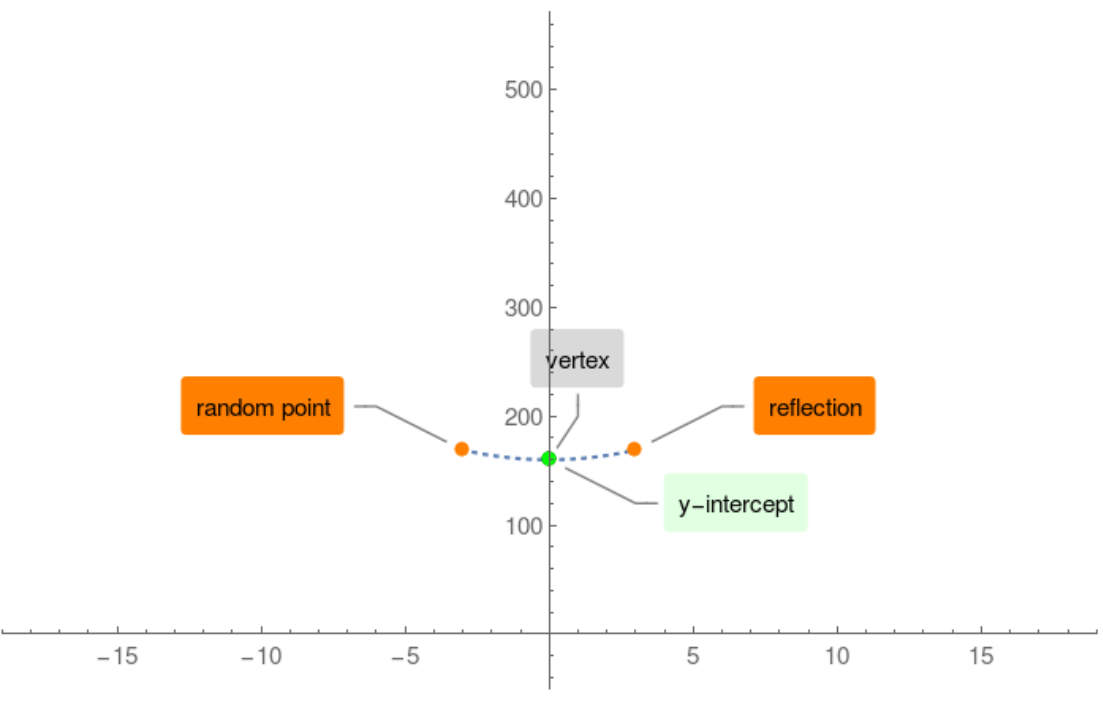
Reflect the point against the vertex's vertical axes:

Reflection = (3,169)




## Step 5.

connect the above computed points:




## Step 6.

Extend the parabola beyond the range of intercepts