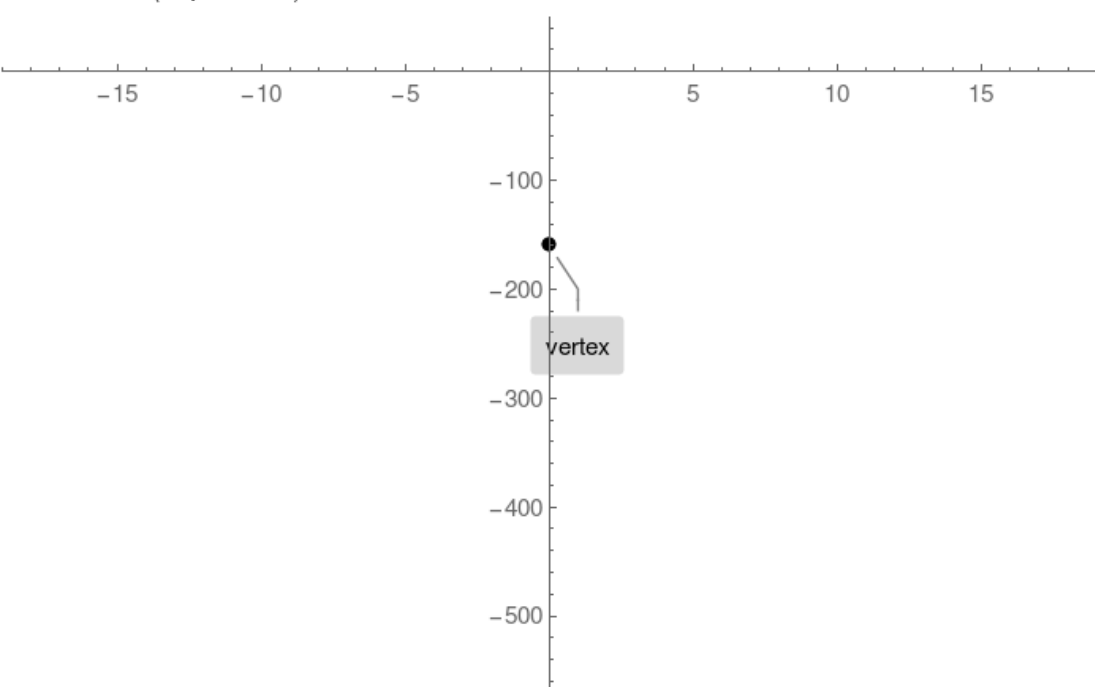# Example 3. Vertex equal to vertical intercept

Plot $r(s) = -s^2 - 160$

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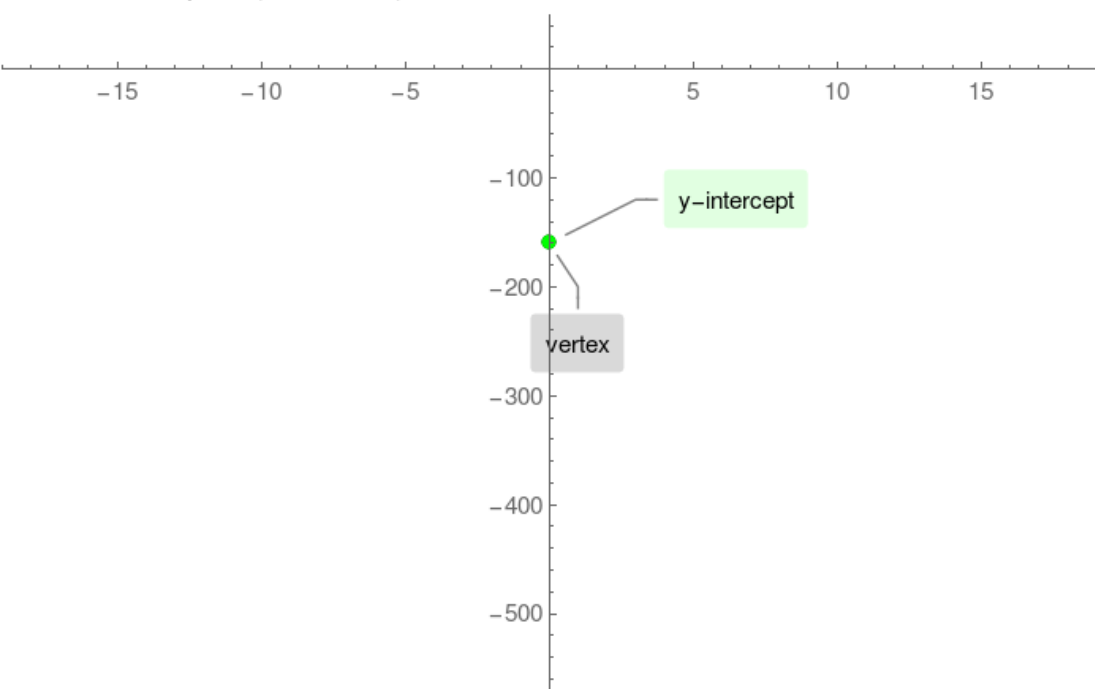vertex $= (0, -160)$

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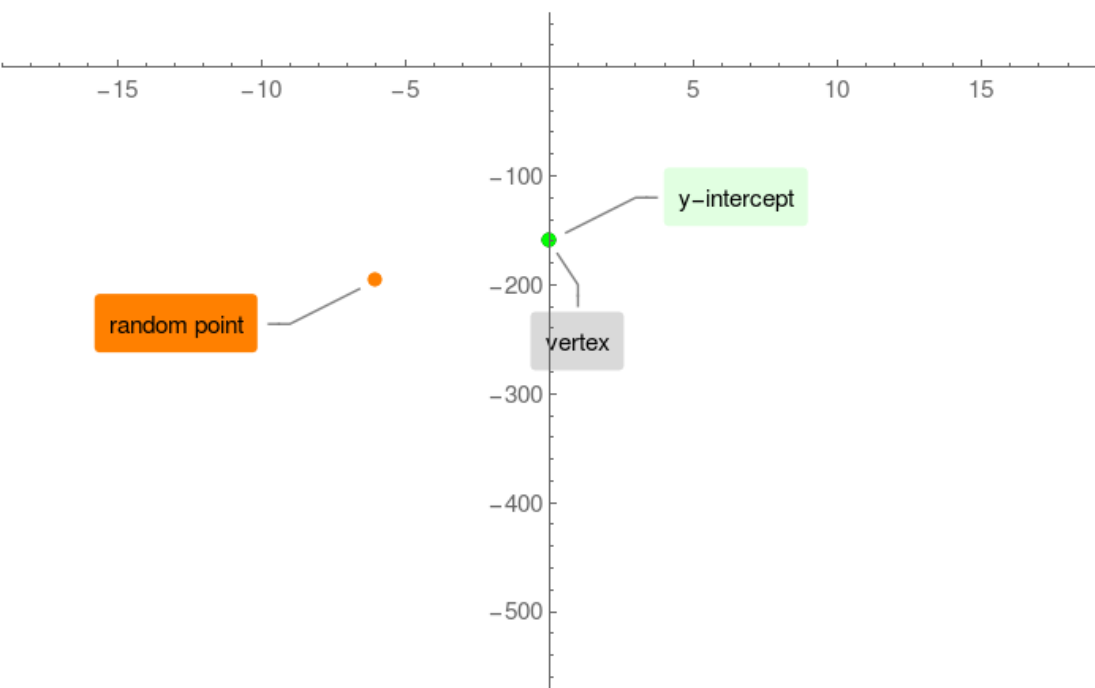r-intercept $= (0, -160)$

Step 3.
There are no s-intercepts!
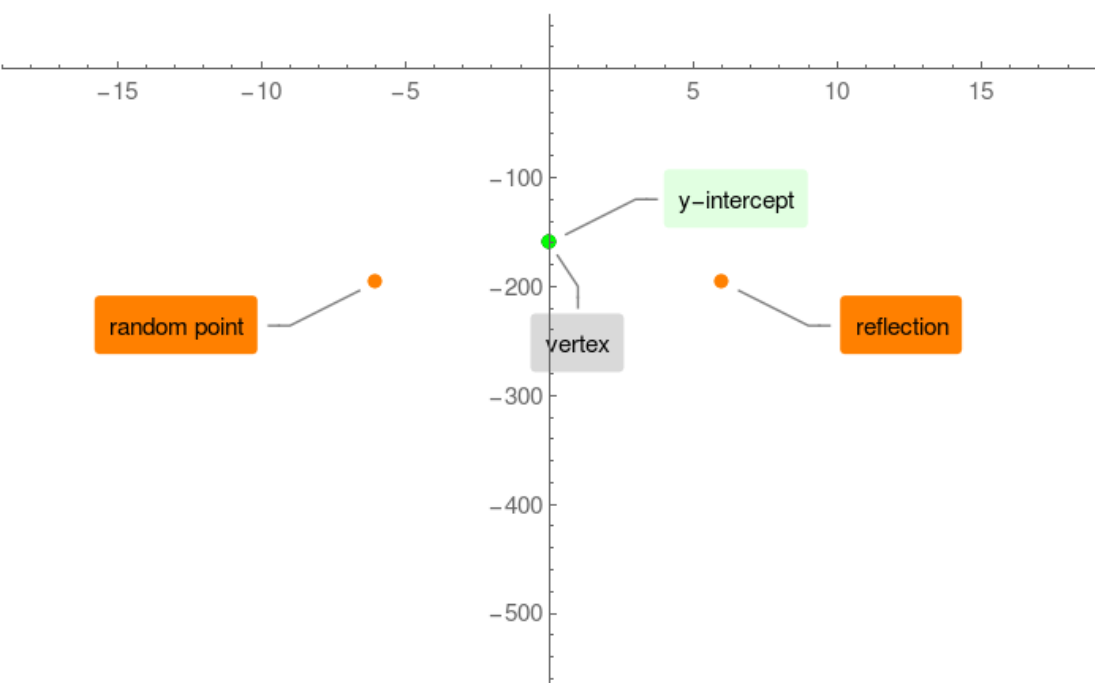Instead compute an arbitrary point on any side of vertex:
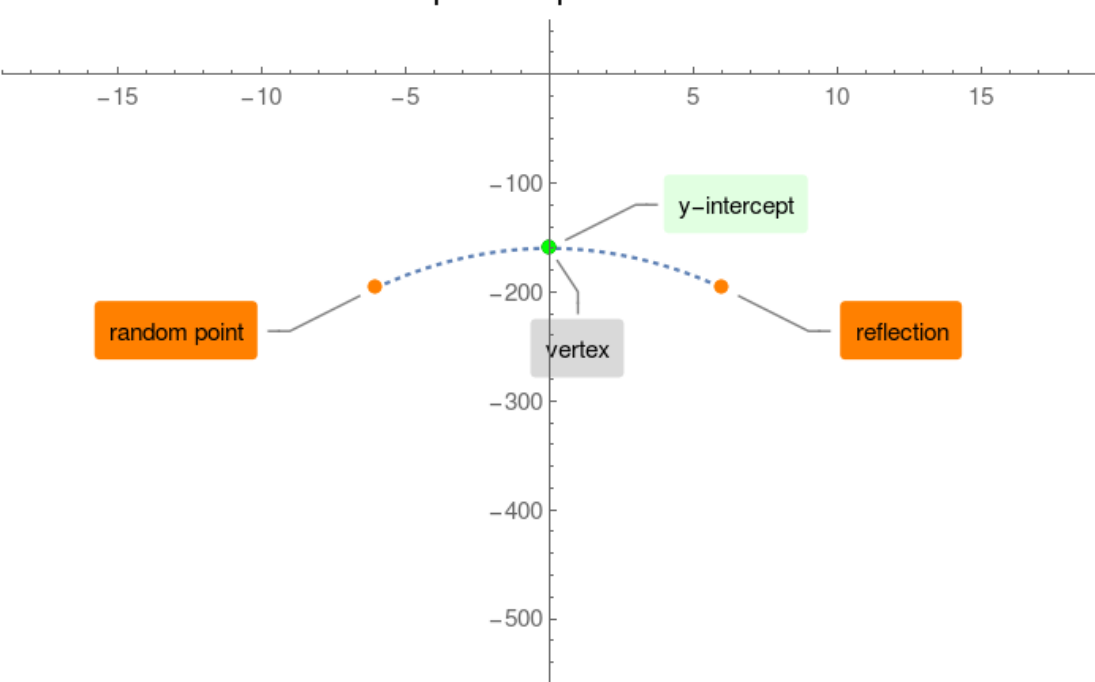Random point $= (-6, -196)$

Step 4.
Reflect the point against the vertex's vertical axes:
Reflection $= (6, -196)$

Step 5.
connect the above computed points:

Step 6.
Extend the parabola beyond the range of intercepts