

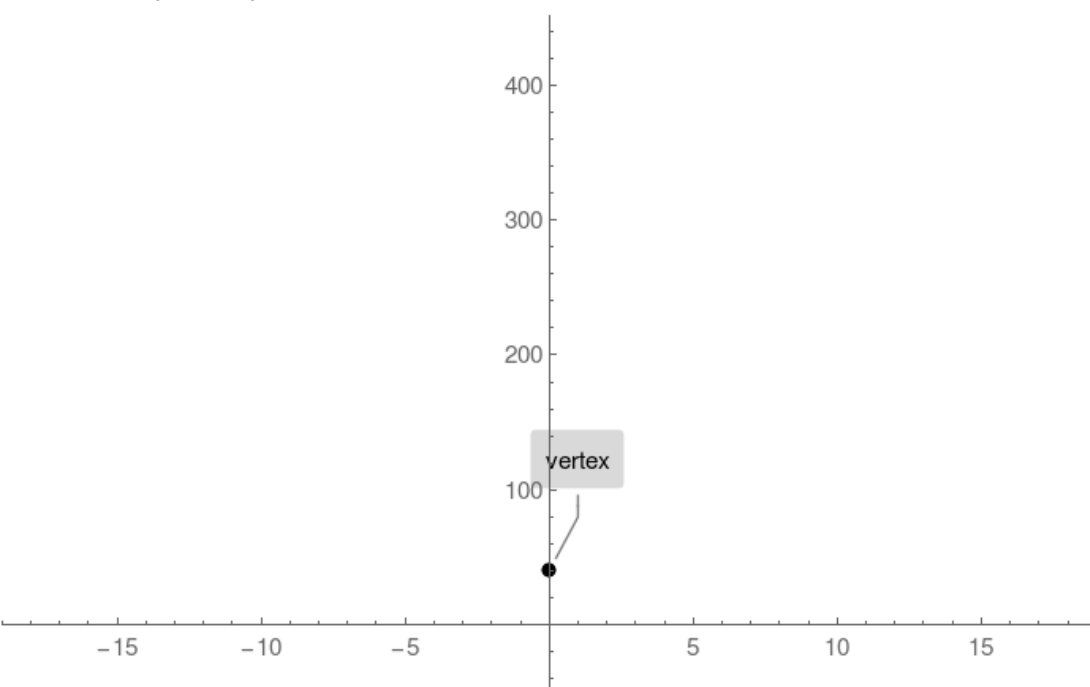
### Example 3. Vertex equal to vertical intercept

Plot  $x(e) = e^2 + 40$

#### Step 1.

Compute vertex and plot single point:

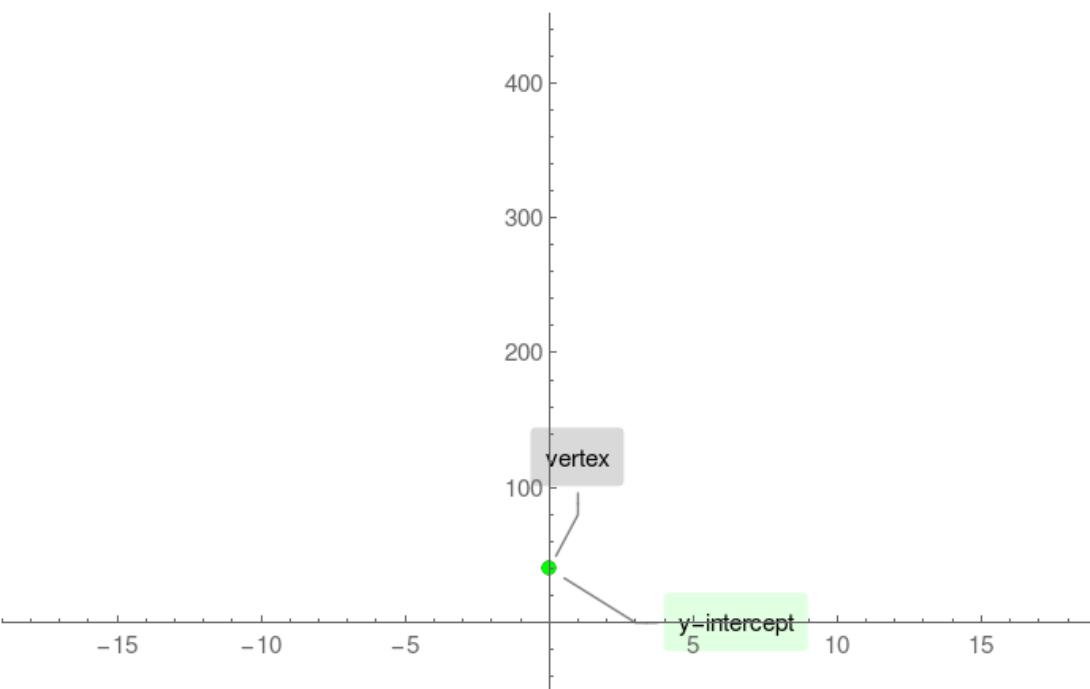
vertex = (0, 40)



#### Step 2.

Compute x-intercept and plot single point:

x-intercept = (0, 40)

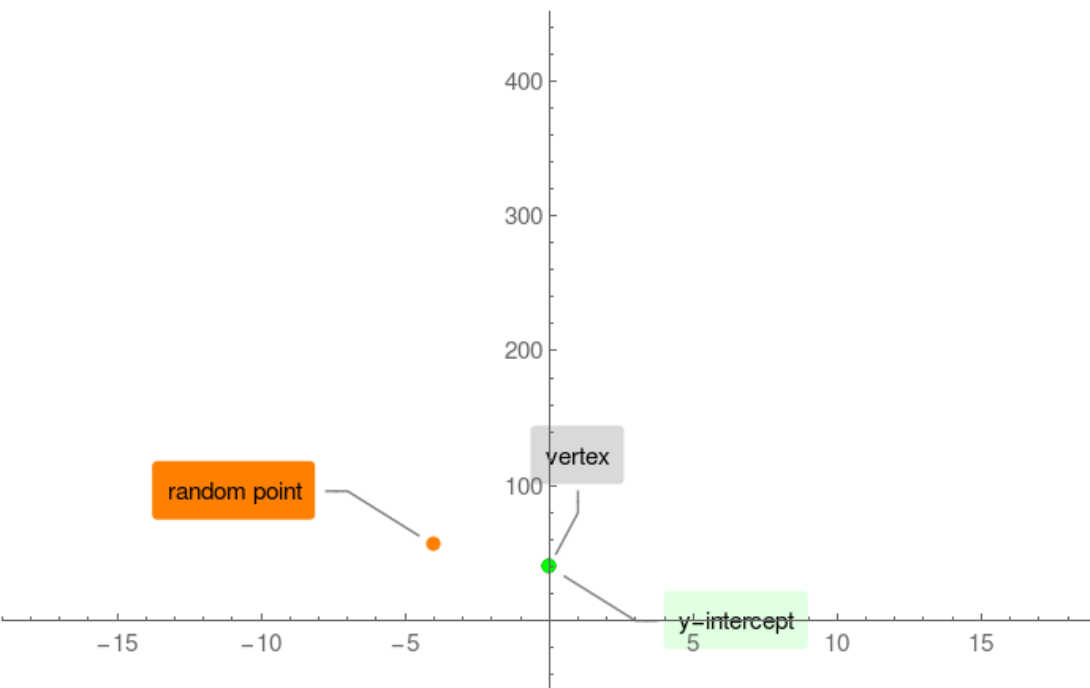


#### Step 3.

There are no e-intercepts!

Instead compute an arbitrary point on any side of vertex:

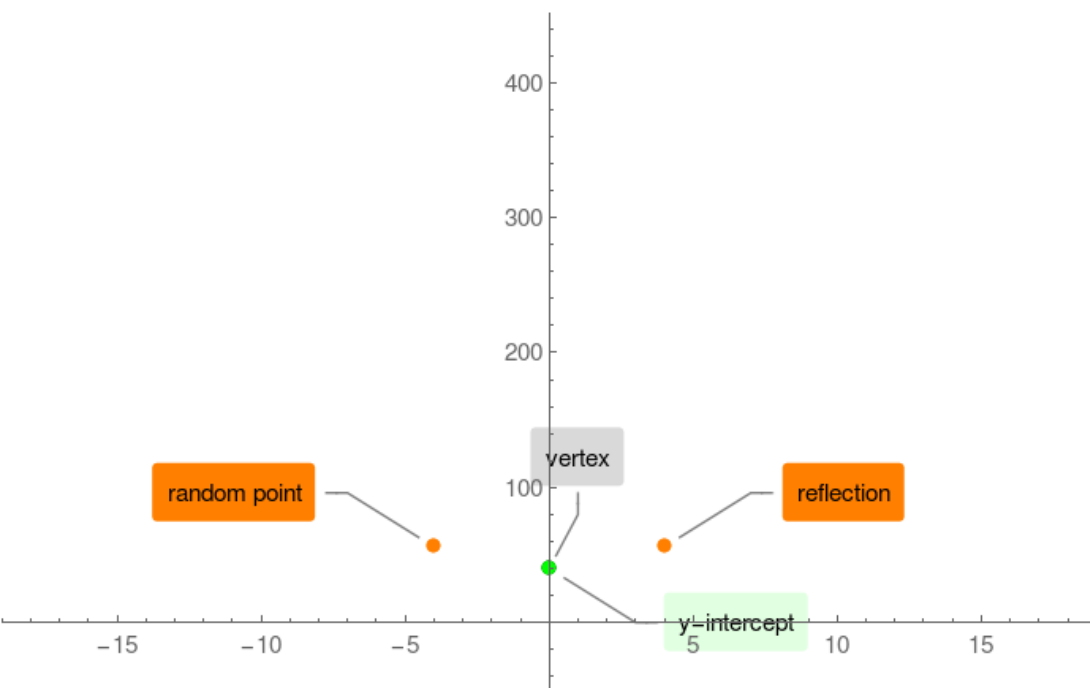
Random point = (-4, 56)



#### Step 4.

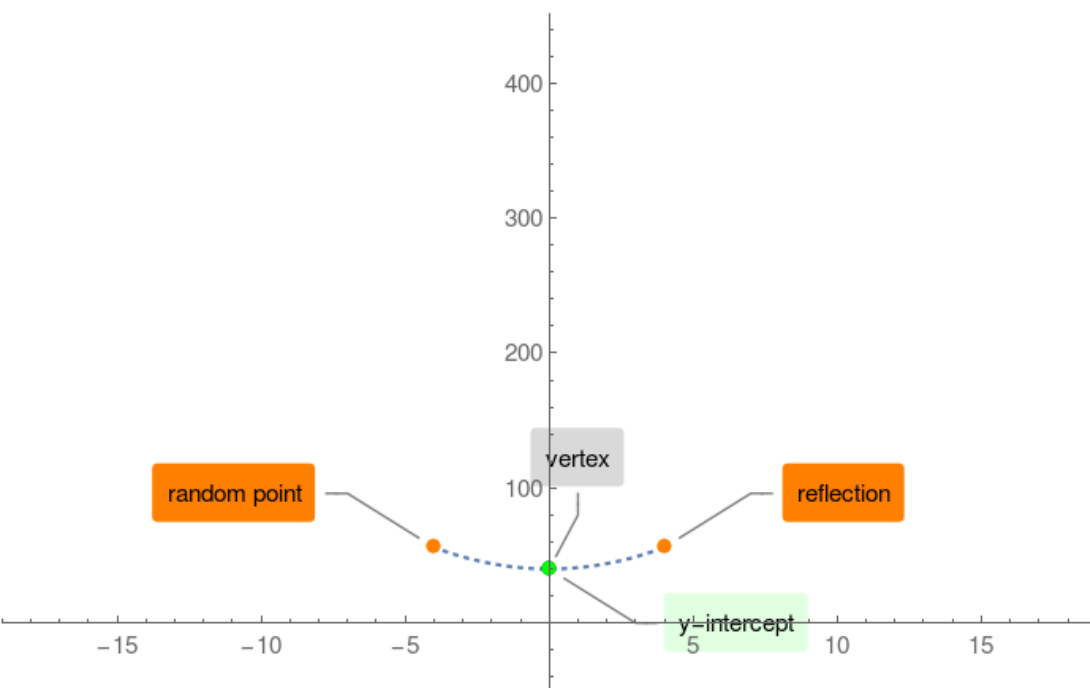
Reflect the point against the vertex's vertical axes:

Reflection = (4, 56)



#### Step 5.

connect the above computed points:



#### Step 6.

Extend the parabola beyond the range of intercepts

