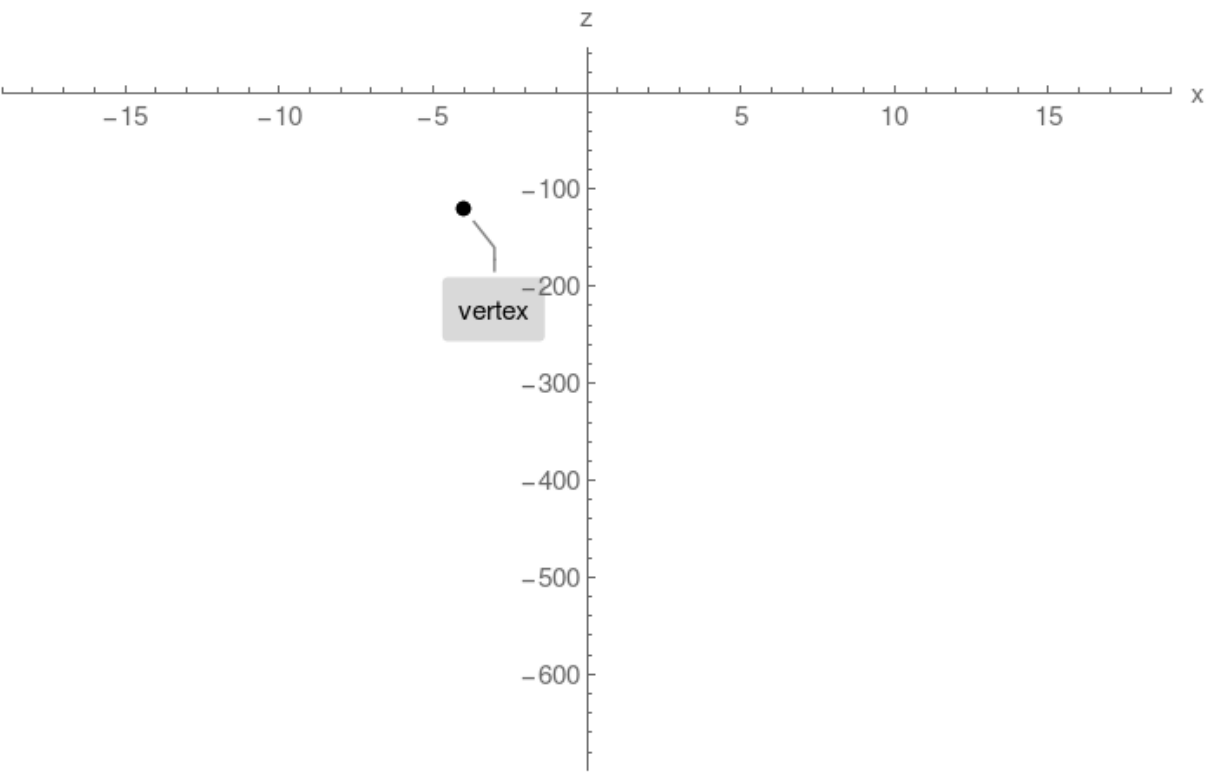
Example 2. No horizontal intercepts found

Plot $z(x) = -x^2 - 8x - 136$

Step 1.

Compute vertex and plot single point:

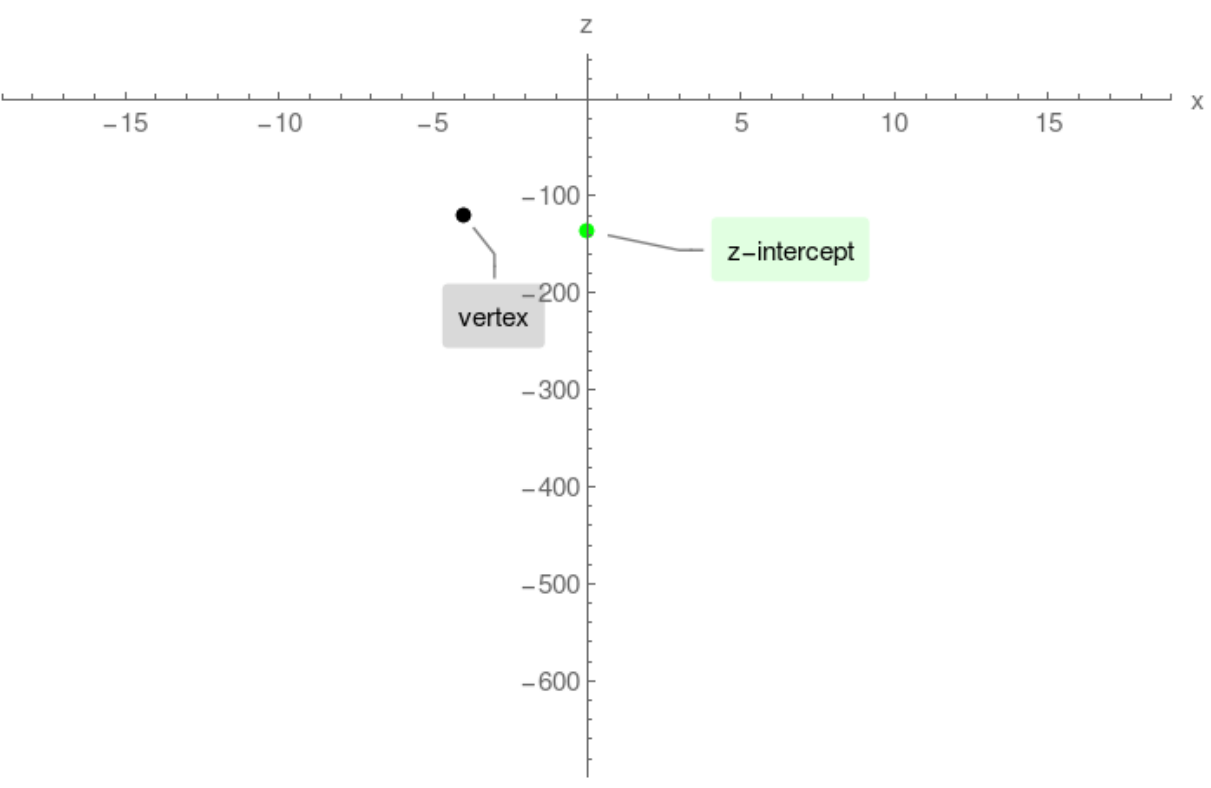
vertex$= (-4, -120)$



Step 2.

Compute z-intercept and plot single point:

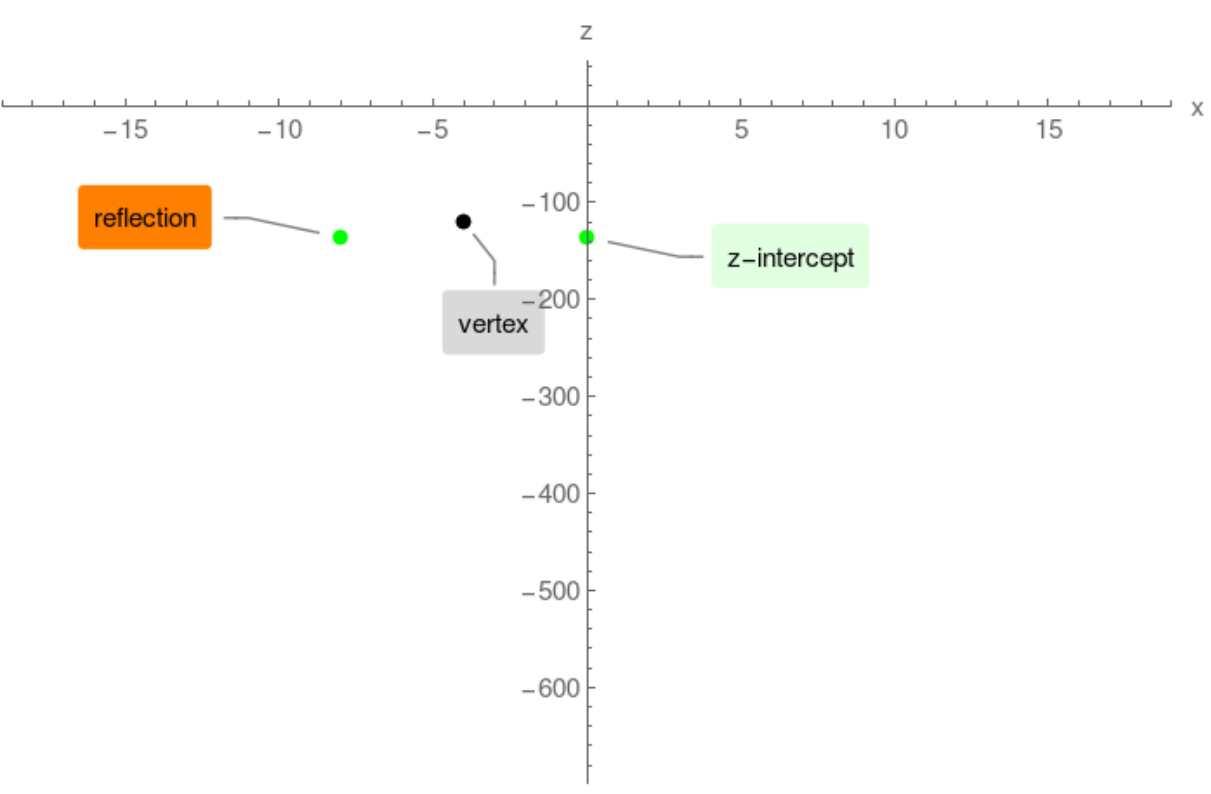
z-intercept$= (0, -136)$



Step 3.

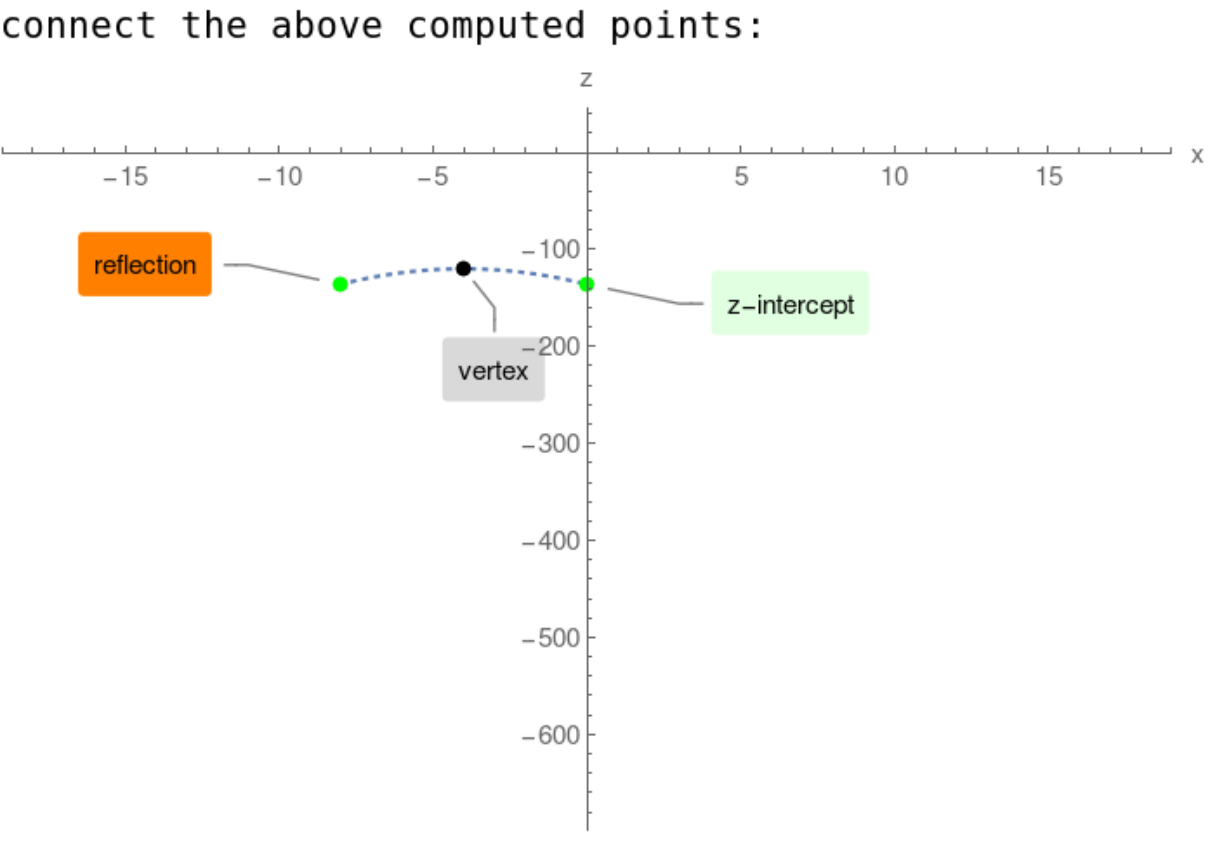
Compute z-intercept reflected against vertex,

reflection$= (-8, -136)$



Step 4.

connect the above computed points:



Step 5.

Extend the parabola beyond the range of intercepts