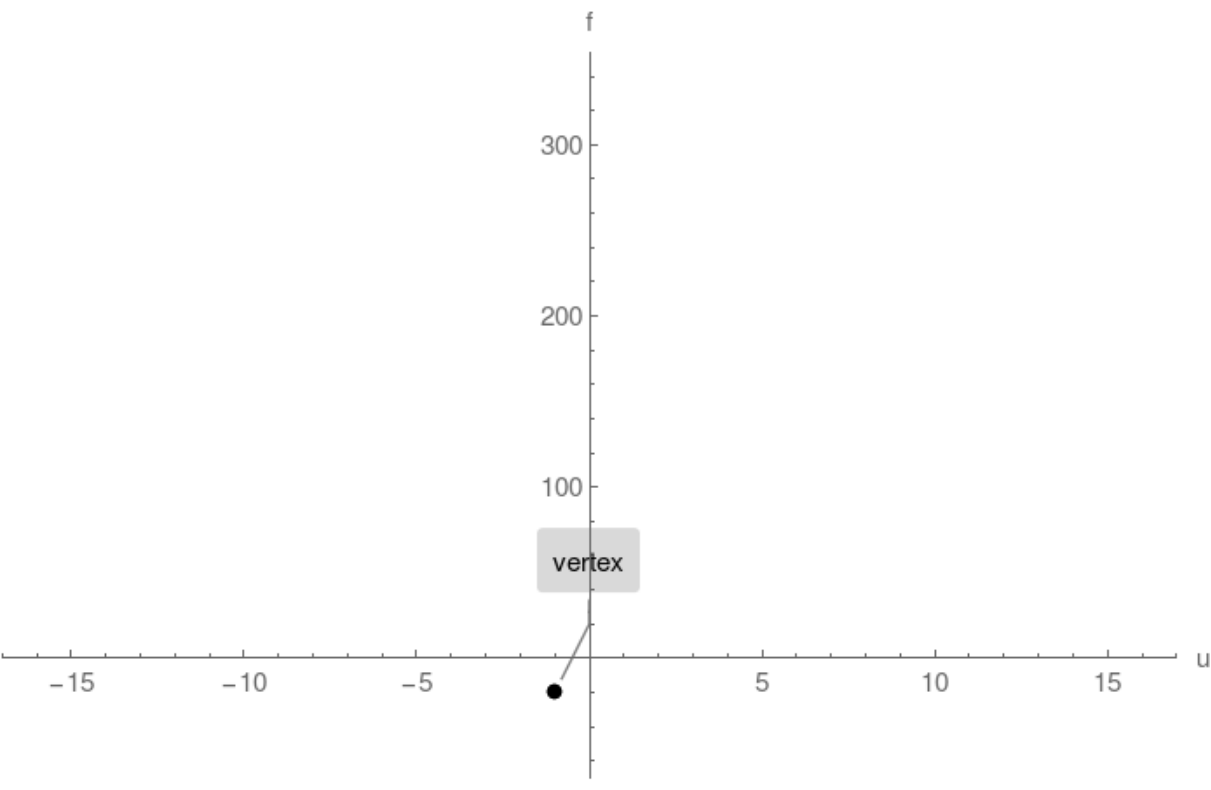
Example 1. 2 horizontal intercepts found

Plot $f(u)=u^2+2u-19$

Step 1.

Compute vertex and plot single point:

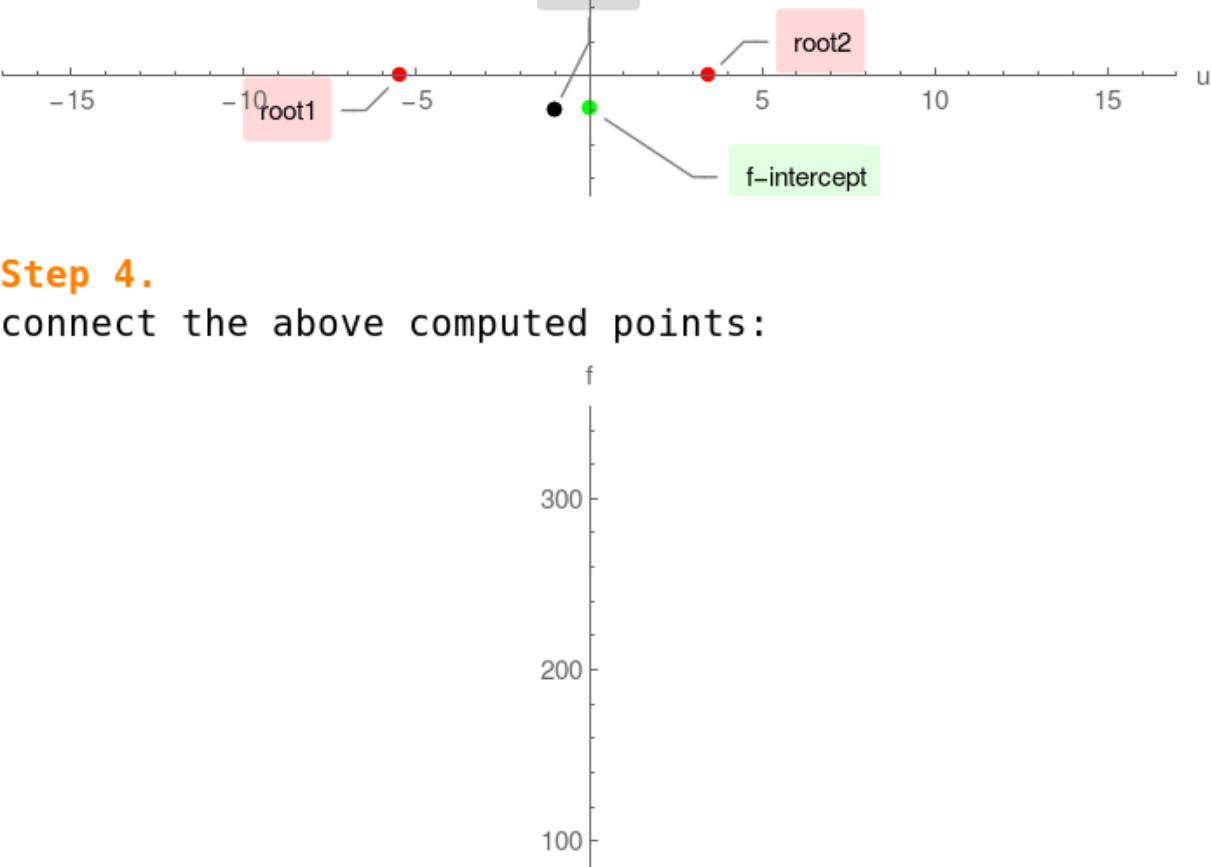
vertex$=(-1,-20)$



Step 2.

Compute f−intercept and plot single point:

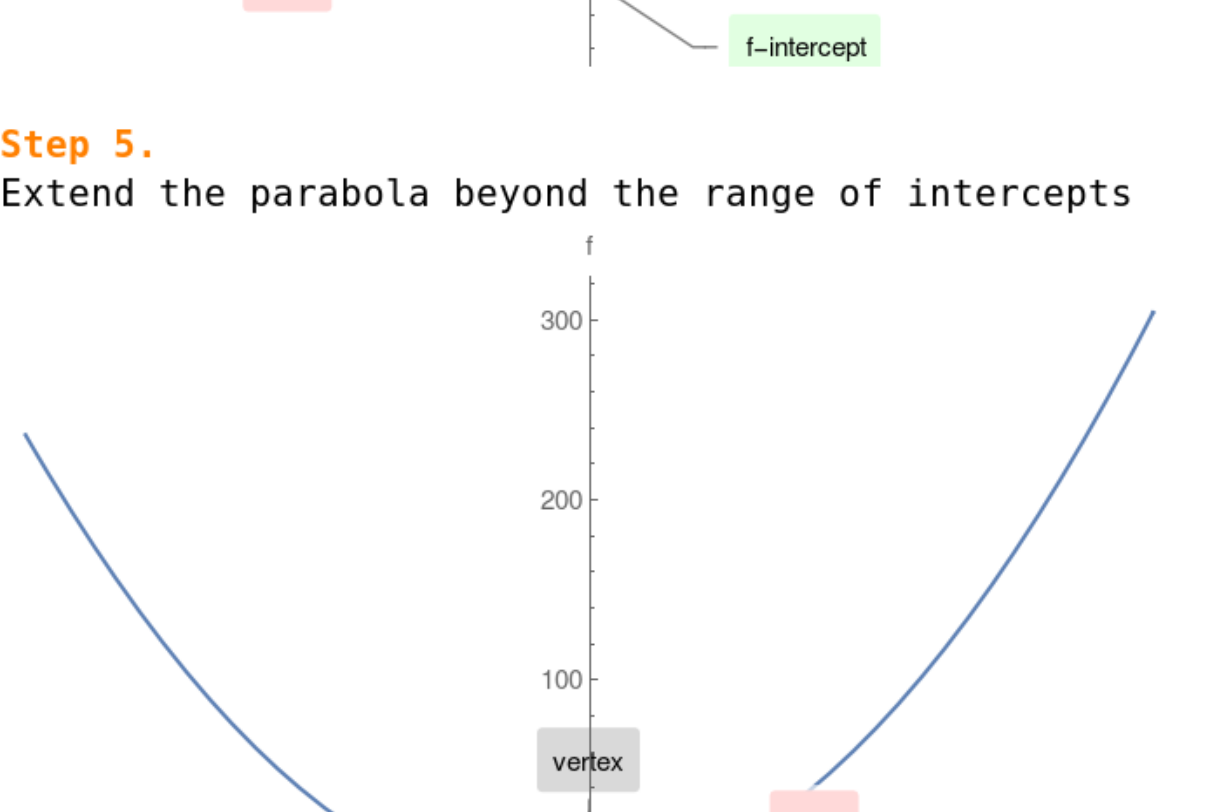
f−intercept$=(0,-19)$



Step 3.

Compute u−intercepts by solving $u^2+2u-19=0$:

$(-1-2\sqrt{5},0)$, $(-1+2\sqrt{5},0)$



Step 4.

connect the above computed points:

Step 5.

Extend the parabola beyond the range of intercepts