

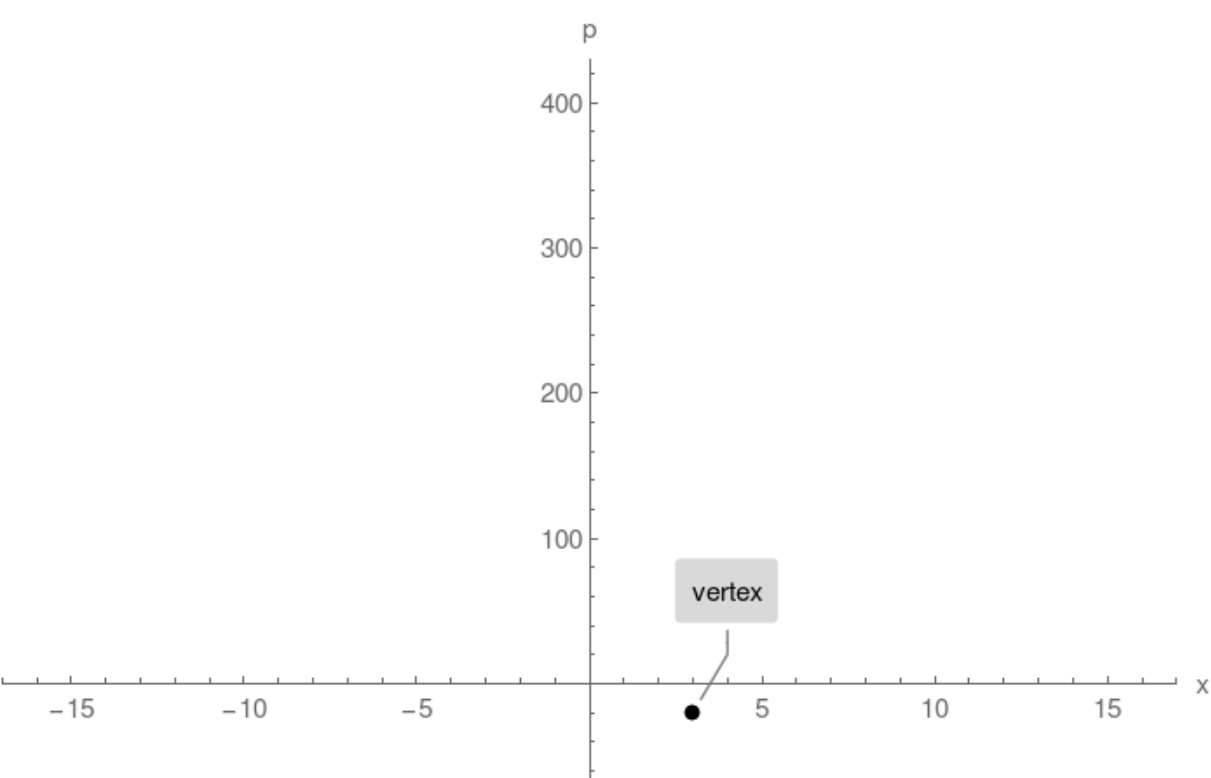
Example 1. 2 horizontal intercepts found

Plot $p(x) = x^2 - 6x - 11$

Step 1.

Compute vertex and plot single point:

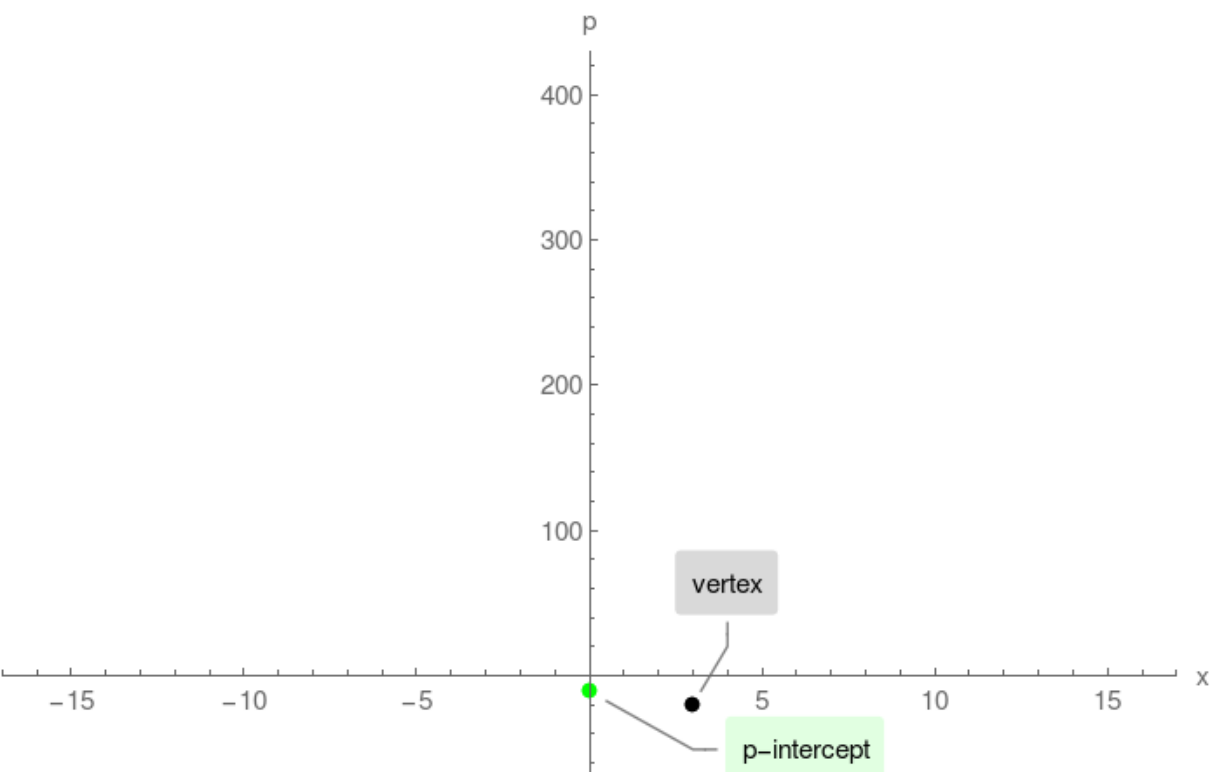
vertex = $(3, -20)$



Step 2.

Compute p-intercept and plot single point:

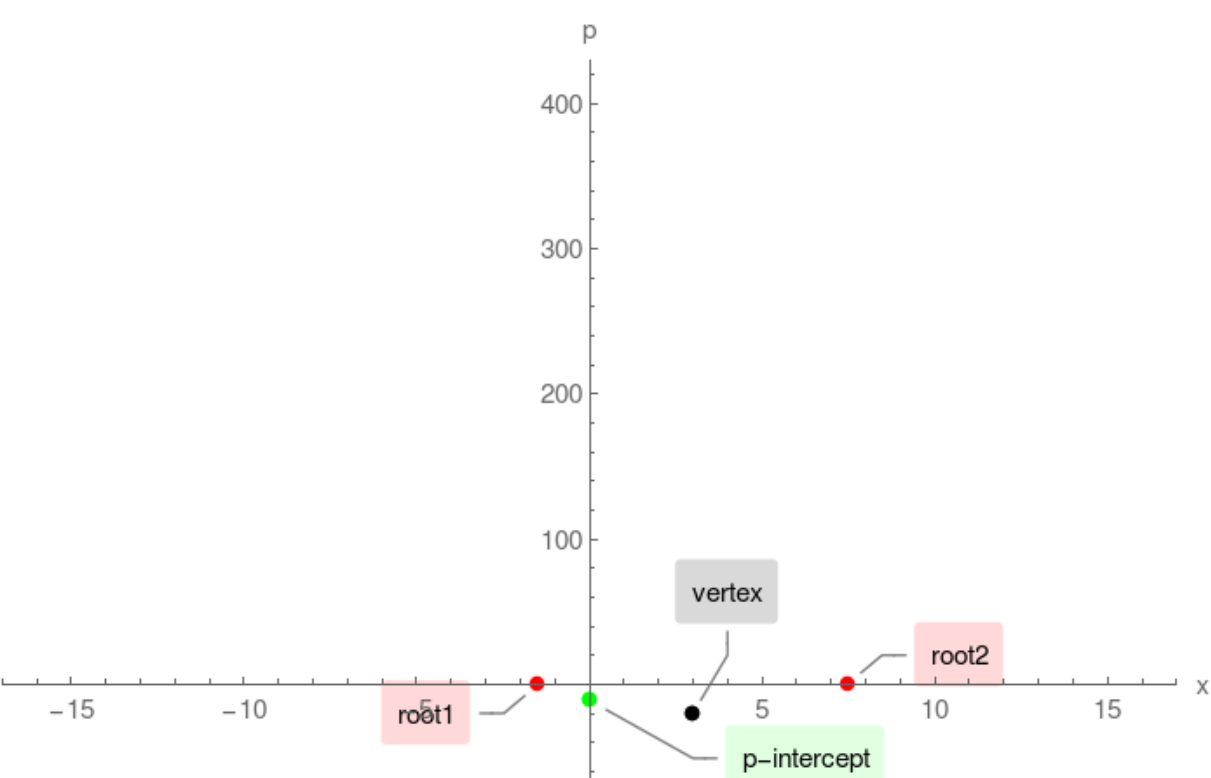
p-intercept = $(0, -11)$



Step 3.

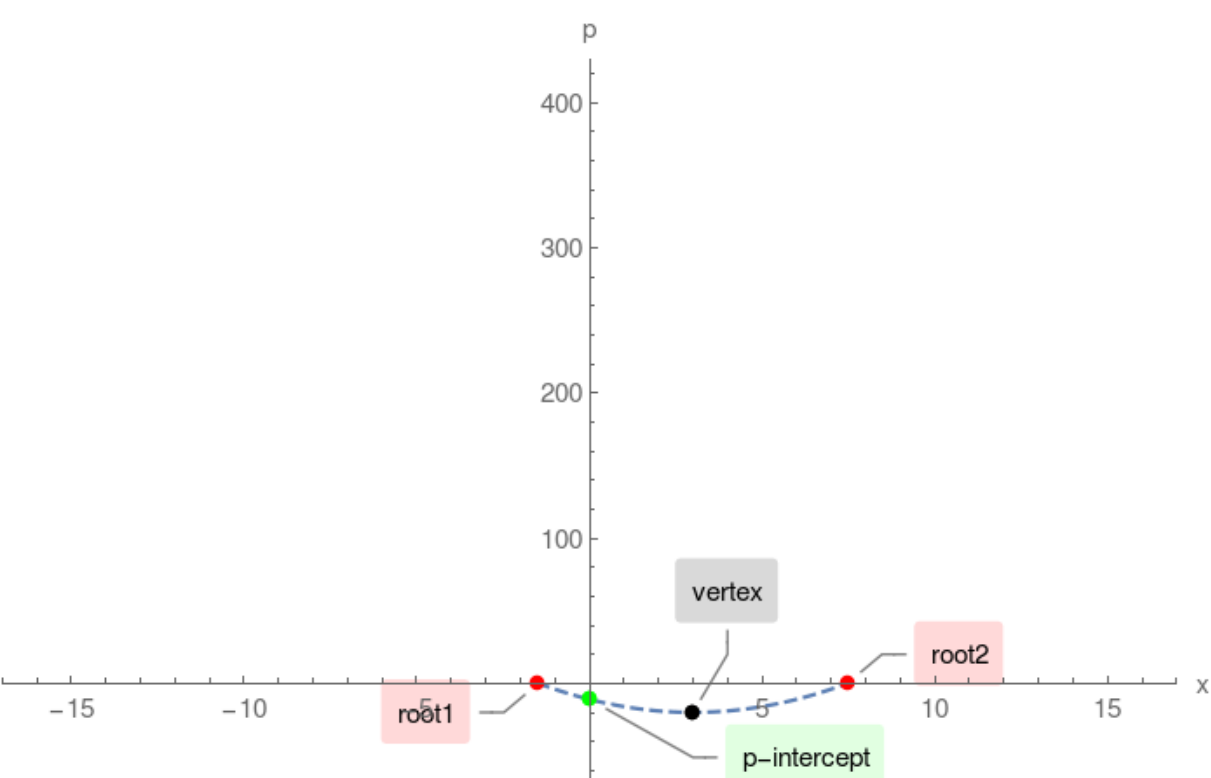
Compute x-intercepts by solving $x^2 - 6x - 11 = 0$:

$(3 - 2\sqrt{5}, 0)$, $(3 + 2\sqrt{5}, 0)$



Step 4.

connect the above computed points:



Step 5.

Extend the parabola beyond the range of intercepts

