

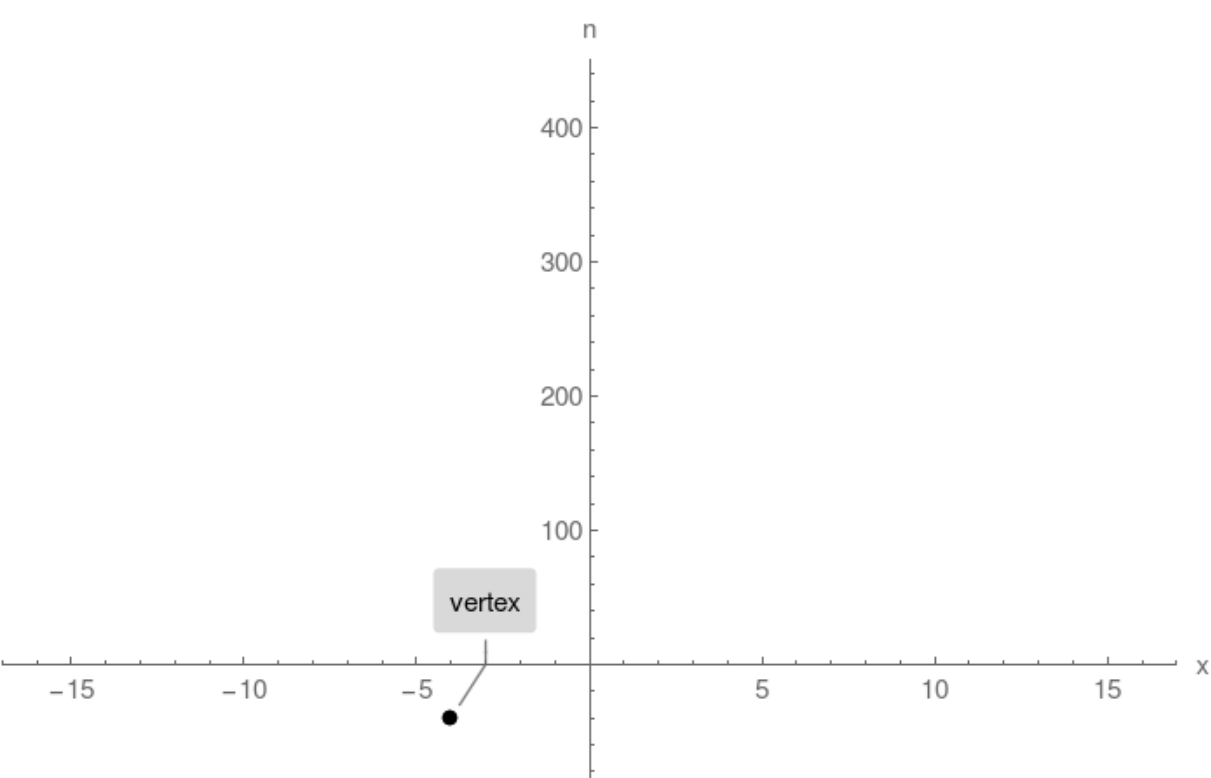
## Example 1. 2 horizontal intercepts found

Plot  $n(x) = x^2 + 8x - 24$

### Step 1.

Compute vertex and plot single point:

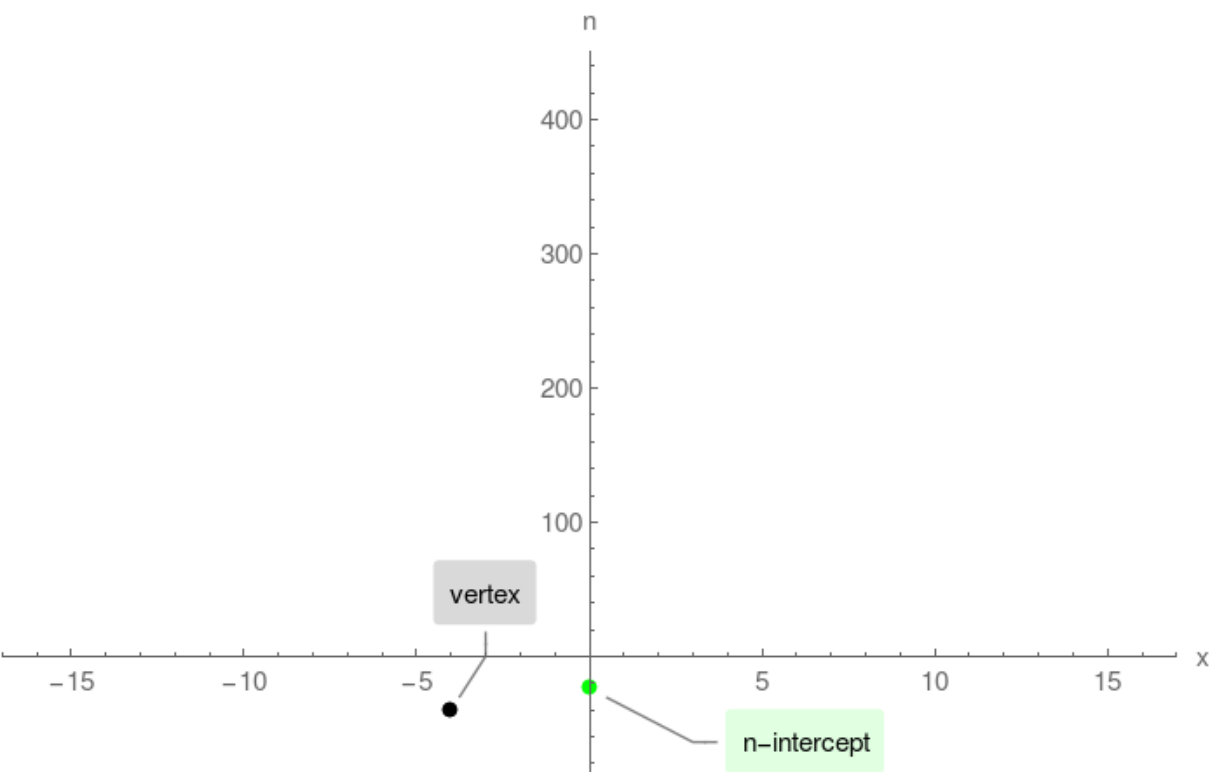
vertex =  $(-4, -40)$



### Step 2.

Compute n-intercept and plot single point:

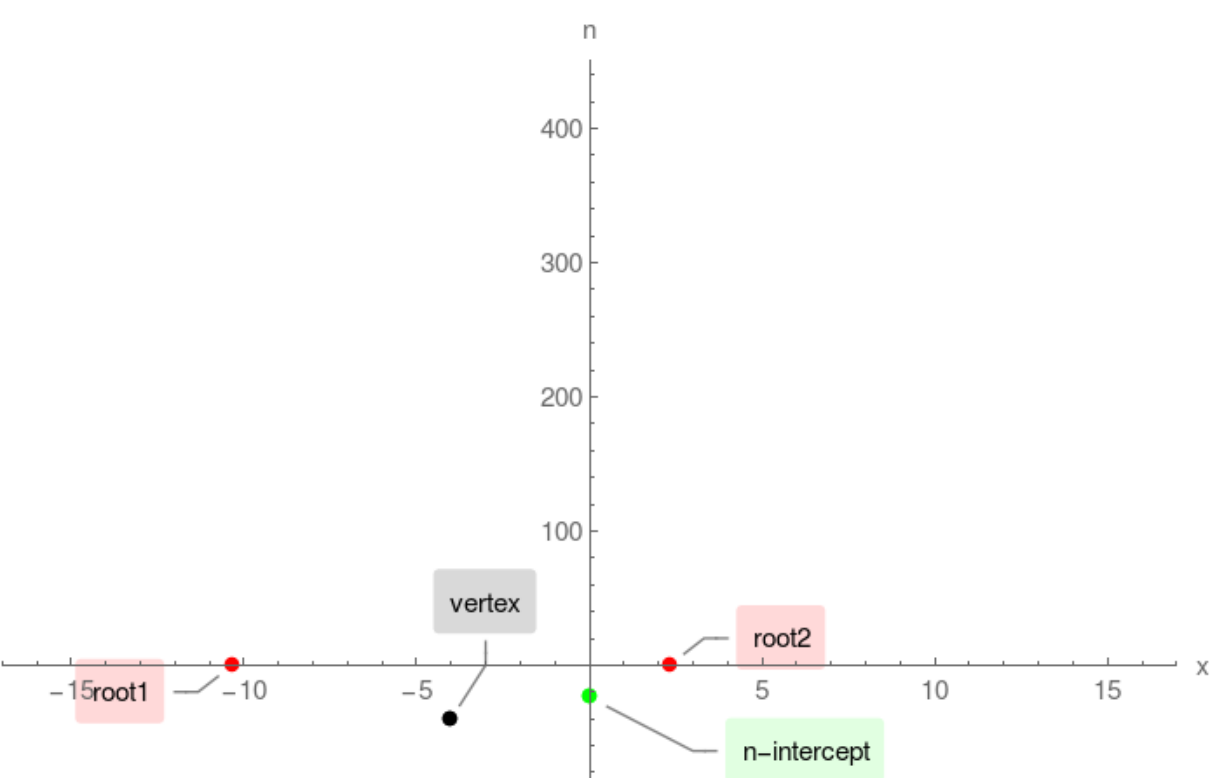
n-intercept =  $(0, -24)$



### Step 3.

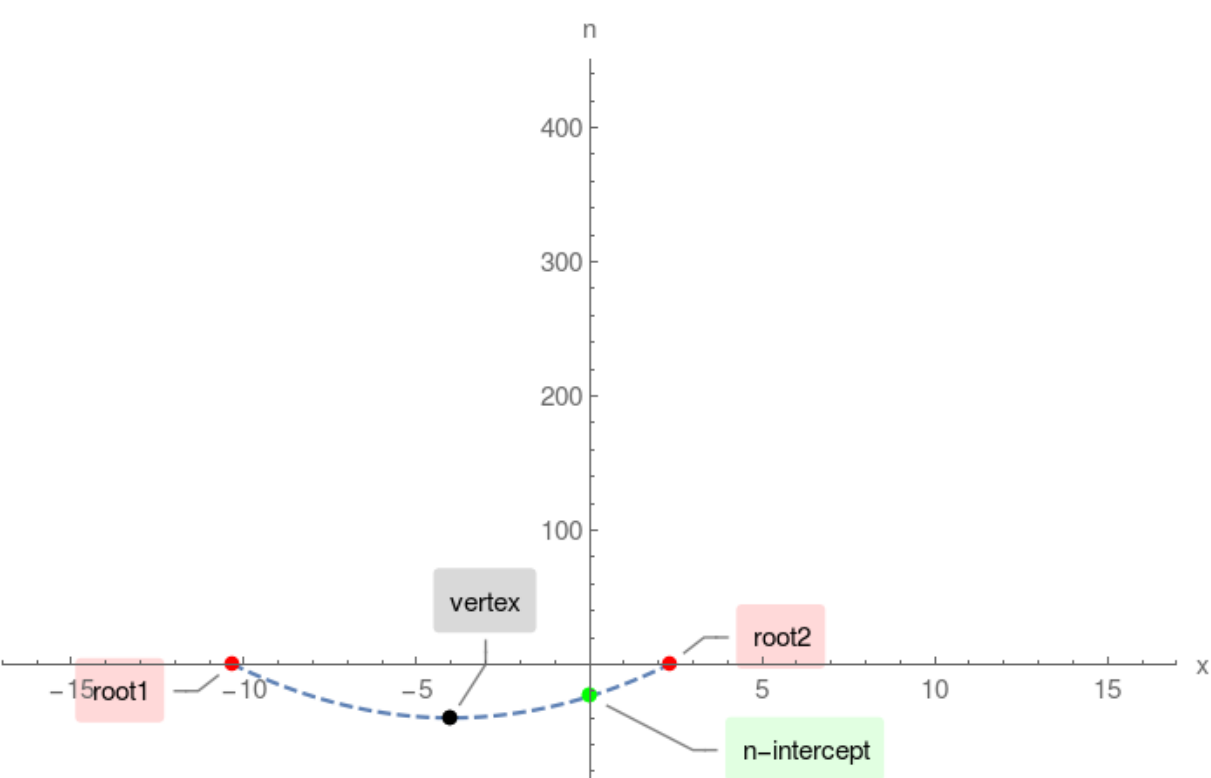
Compute x-intercepts by solving  $x^2 + 8x - 24 = 0$ :

$(-4 - 2\sqrt{10}, 0)$ ,  $(-4 + 2\sqrt{10}, 0)$



### Step 4.

connect the above computed points:



### Step 5.

Extend the parabola beyond the range of intercepts

