

Plotting the Parabola

How to plot : $v(h) = ah^2 + bh + c$

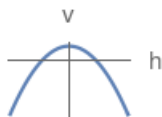
Step 1.

Examine the sign for the leading coefficient

If $a > 0$ then the valley shape:

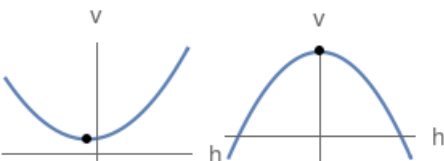


If $a < 0$ then the hill shape:



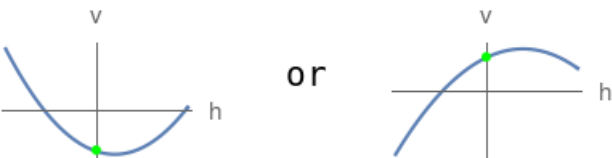
Step 2.

Compute the vertex: $(-\frac{b}{2a}, v(-\frac{b}{2a}))$



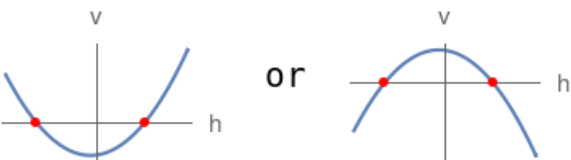
Step 3.

Compute the v-intercept by setting $h=0$, $0^2a + 0b + c = c$



Step 4.

Compute the h-intercepts by solving: $ah^2 + bh + c = 0$



Step 5.

Sketch a rough plot, try to connect vertex to intercepts:

