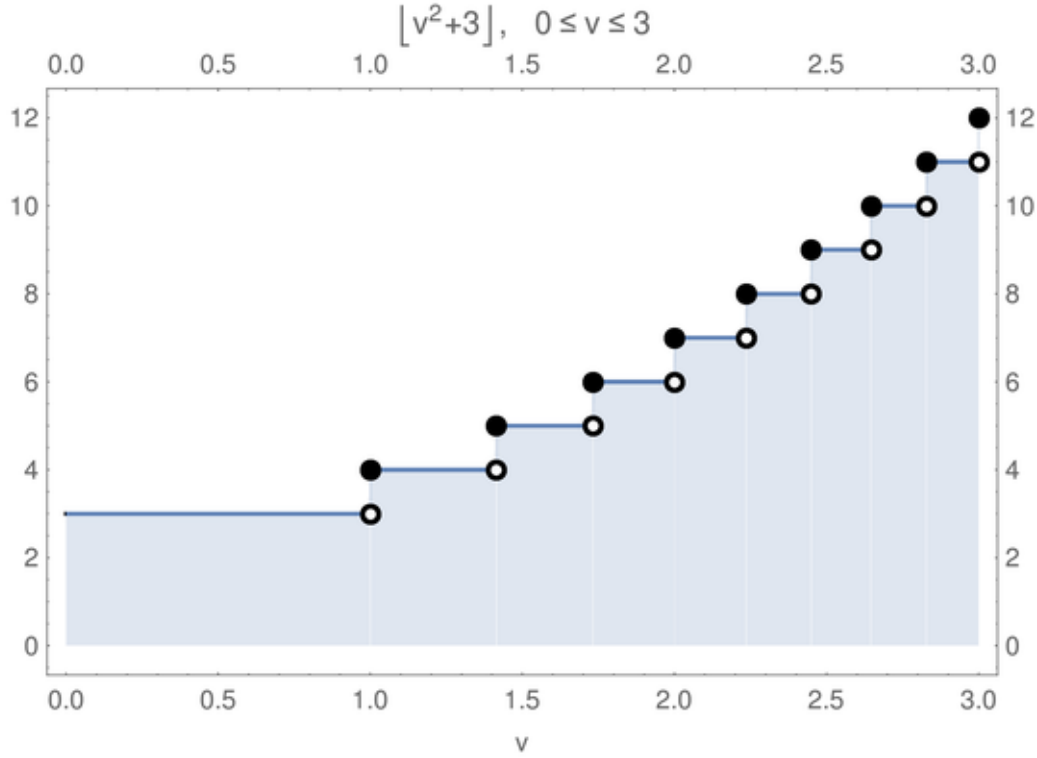
Piecewise Composite Functions



$$\begin{cases} 3 & v < 1 \\ 4 & 1 \le v < \sqrt{2} \\ 5 & \sqrt{2} \le v < \sqrt{3} \\ 6 & \sqrt{3} \le v < 2 \\ 7 & 2 \le v < \sqrt{5} \\ 8 & \sqrt{5} \le v < \sqrt{6} \\ 9 & \sqrt{6} \le v < \sqrt{7} \\ 10 & \sqrt{7} \le v < 2\sqrt{2} \\ 11 & \text{True} \end{cases}$$