Piecewise Composite Functions

$\lfloor j^2+1 \rfloor, \quad 0 \le j \le 3$
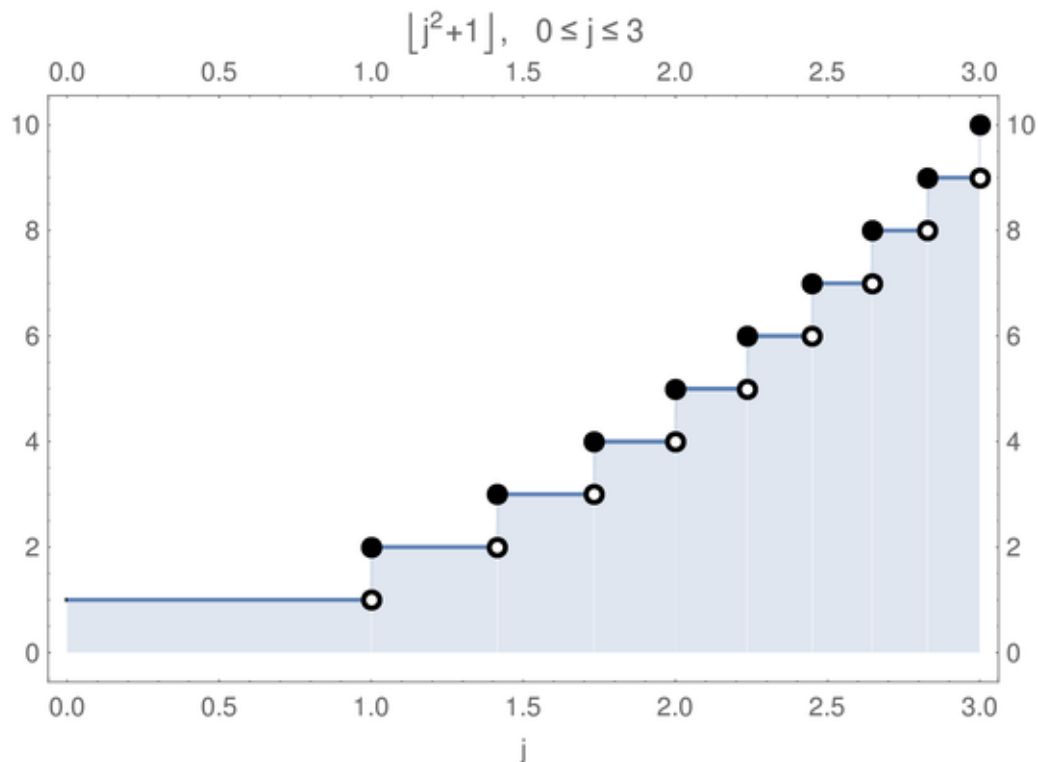
$$\begin{cases} 1 & j < 1 \\ 2 & 1 \le j < \sqrt{2} \\ 3 & \sqrt{2} \le j < \sqrt{3} \\ 4 & \sqrt{3} \le j < 2 \\ 5 & 2 \le j < \sqrt{5} \\ 6 & \sqrt{5} \le j < \sqrt{6} \\ 7 & \sqrt{6} \le j < \sqrt{7} \\ 8 & \sqrt{7} \le j < 2\sqrt{2} \\ 9 & \text{True} \end{cases}$$