Piecewise Composite Functions

$\lceil h^2+3 \rceil, \quad 1 \leq h \leq 3$
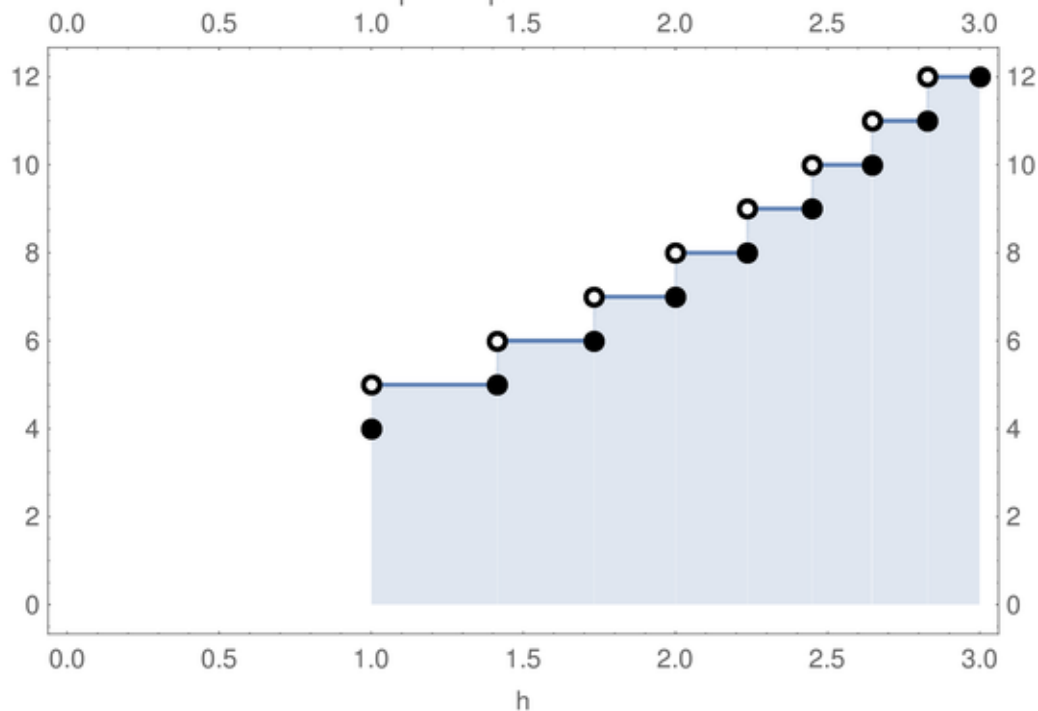
$$\begin{cases} 5 & h \leq \sqrt{2} \\ 6 & \sqrt{2} < h \leq \sqrt{3} \\ 7 & \sqrt{3} < h \leq 2 \\ 8 & 2 < h \leq \sqrt{5} \\ 9 & \sqrt{5} < h \leq \sqrt{6} \\ 10 & \sqrt{6} < h \leq \sqrt{7} \\ 11 & \sqrt{7} < h \leq 2\sqrt{2} \\ 12 & \text{True} \end{cases}$$