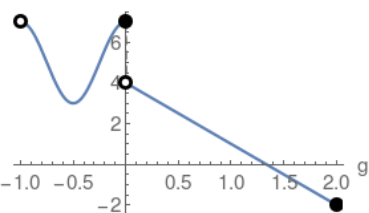


# Piecewise Functions

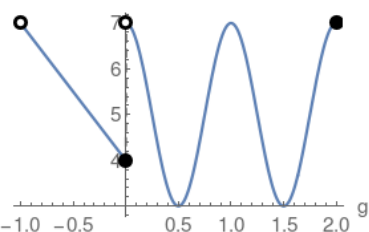
To define piecewise means that the function values and graphs are defined over a particular and generally limited section of the g-axis

$$\begin{cases} 2 \cos(2 \pi g) + 5 & -1 < g \leq 0 \\ 4 - 3g & 0 < g \leq 2 \end{cases}$$



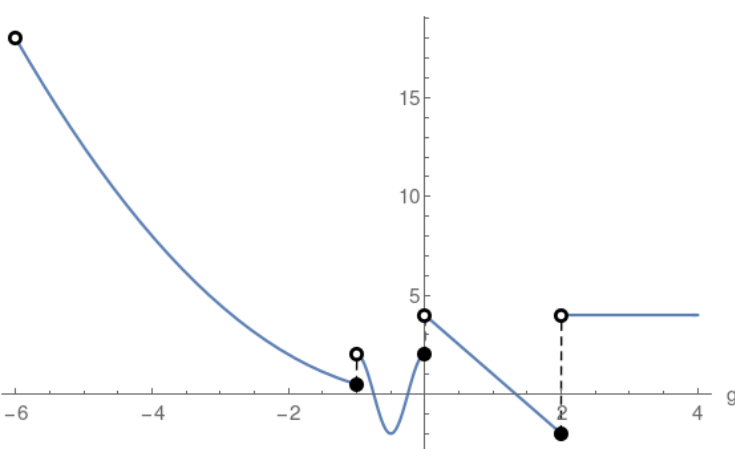
where two functions are placed together, and for that matter could be pieced differently i.e. swapped:

$$\begin{cases} 4 - 3g & -1 < g \leq 0 \\ 2 \cos(2 \pi g) + 5 & 0 < g \leq 2 \end{cases}$$



More and more complicated functions could be placed together:

$$\begin{cases} \frac{g^2}{2} & -6 < g \leq -1 \\ 2 \cos(2 \pi g) & -1 < g \leq 0 \\ 4 - 3g & 0 < g \leq 2 \\ 4 & g > 2 \end{cases}$$



**Solid disk** refers to inclusion of the point or any of  $\leq \geq =$  operators



**Hollow disk** refers to the exclusion or any of the  $< >$  operators

