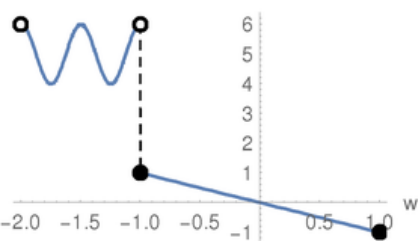


Piecewise Functions

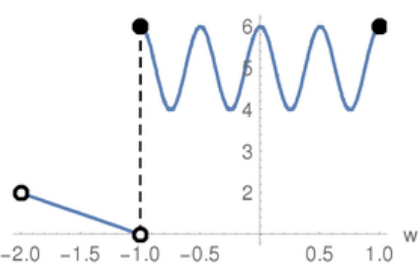
To define piecewise means that the function values and graphs are defined over a particular and generally limited section of the w-axis

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



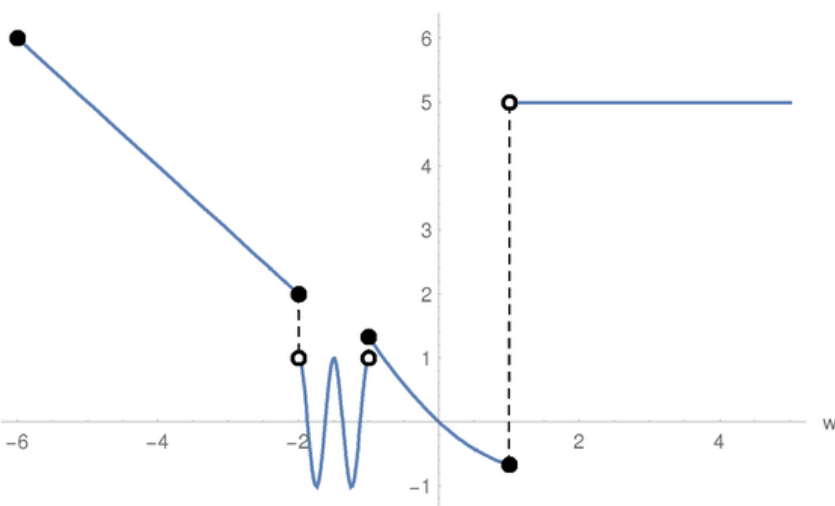
where two functions are pieced together, and for that matter could be pieced differently i.e. swapped:

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



More and more complicated functions could be pieced together:

$$\begin{cases} -w & -6 \leq w \leq -2 \\ \cos(4\pi w) & -2 < w < -1 \\ \frac{w^2}{3} - w & -1 \leq w \leq 1 \\ 5 & w > 1 \end{cases}$$



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

