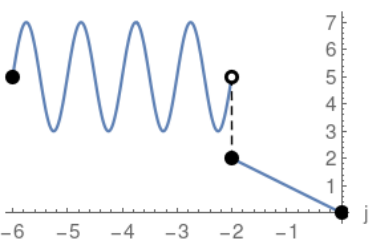


Piecewise Functions

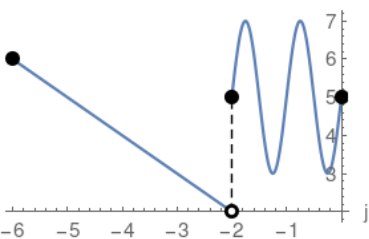
To define piecewise means that the function values and graphs are defined over a particular and generally limited section of the j -axis

$$\begin{cases} 2 \sin(2 \pi j) + 5 & -6 \leq j < -2 \\ -j & -2 \leq j \leq 0 \end{cases}$$



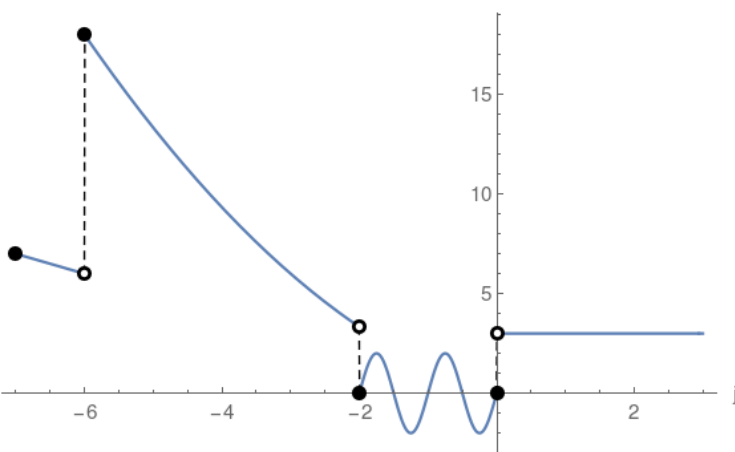
where two functions are pieced together, and for that matter could be pieced differently i.e. swapped:

$$\begin{cases} -j & -6 \leq j < -2 \\ 2 \sin(2 \pi j) + 5 & -2 \leq j \leq 0 \end{cases}$$



More and more complicated functions could be pieced together:

$$\begin{cases} -j & -7 \leq j < -6 \\ \frac{j^2}{3} - j & -6 \leq j < -2 \\ 2 \sin(2 \pi j) & -2 \leq j \leq 0 \\ 3 & j > 0 \end{cases}$$



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

