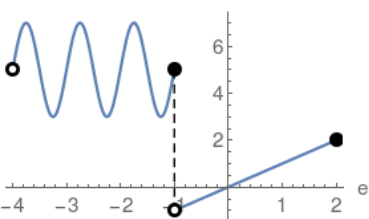


# Piecewise Functions

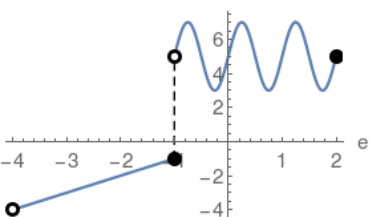
To define piecewise means that the function values and graphs are defined over a particular and generally limited section of the e-axis

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



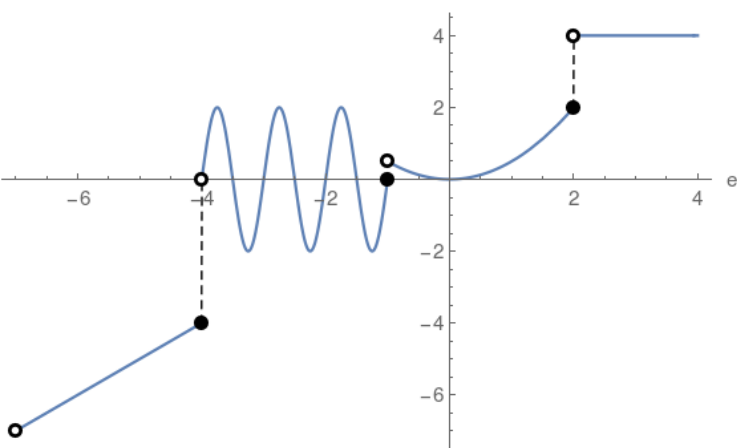
where two functions are stitched together, and for that matter could be pieced differently i.e. swapped:

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



More and more complicated functions could be stitched together:

$$\begin{cases} e & -7 < e \leq -4 \\ 2 \sin(2 \pi e) & -4 < e \leq -1 \\ \frac{e^2}{2} & -1 < e \leq 2 \\ 4 & e > 2 \end{cases}$$



**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

