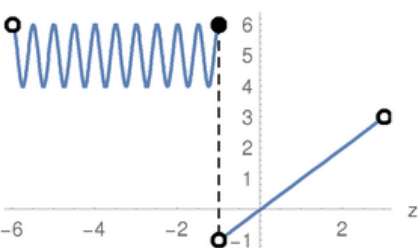


Piecewise Functions

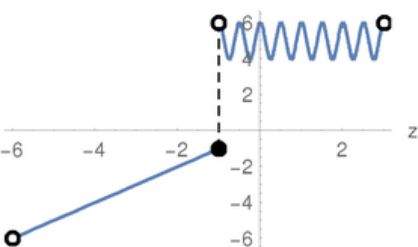
To define piecewise means that the function values and graphs are defined over a particular and generally limited section of the z-axis

$$\begin{cases} \cos(4\pi z) + 5 & -6 < z \leq -1 \\ z & -1 < z < 3 \end{cases}$$



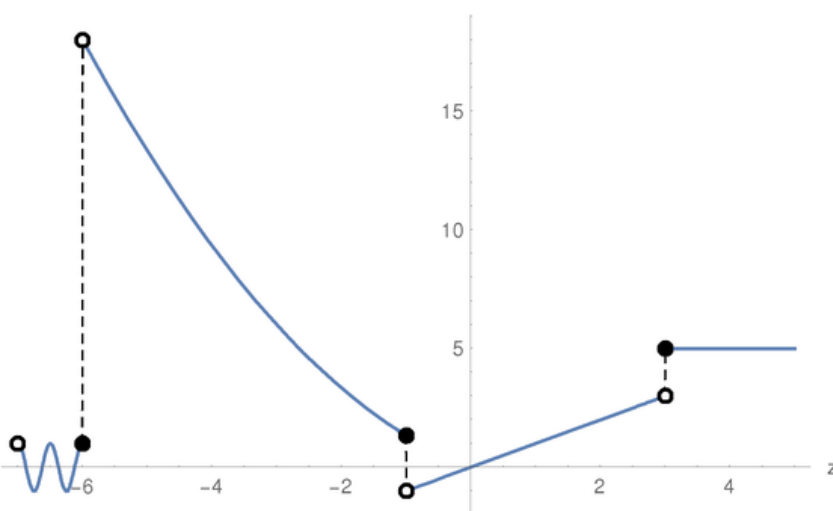
where two functions are juxtaposed together, and for that matter could be pieced differently i.e. swapped:

$$\begin{cases} z & -6 < z \leq -1 \\ \cos(4\pi z) + 5 & -1 < z < 3 \end{cases}$$



More and more complicated functions could be juxtaposed together:

$$\begin{cases} \cos(4\pi z) & -7 < z \leq -6 \\ \frac{z^2}{3} - z & -6 < z \leq -1 \\ z & -1 < z < 3 \\ 5 & z \geq 3 \end{cases}$$



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

