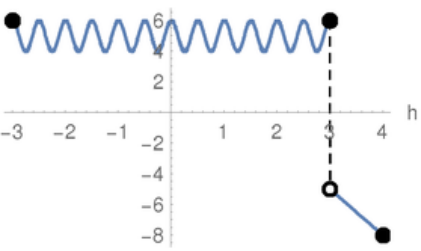
Piecewise Functions

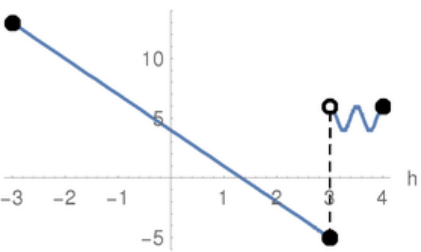
To define piecewise means that the function values and graphs are defined over a particular and generally limited section of the h-axis

$$\begin{cases} \cos(4\pi h) + 5 & -3 \le h \le 3 \\ 4 - 3h & 3 < h \le 4 \end{cases}$$



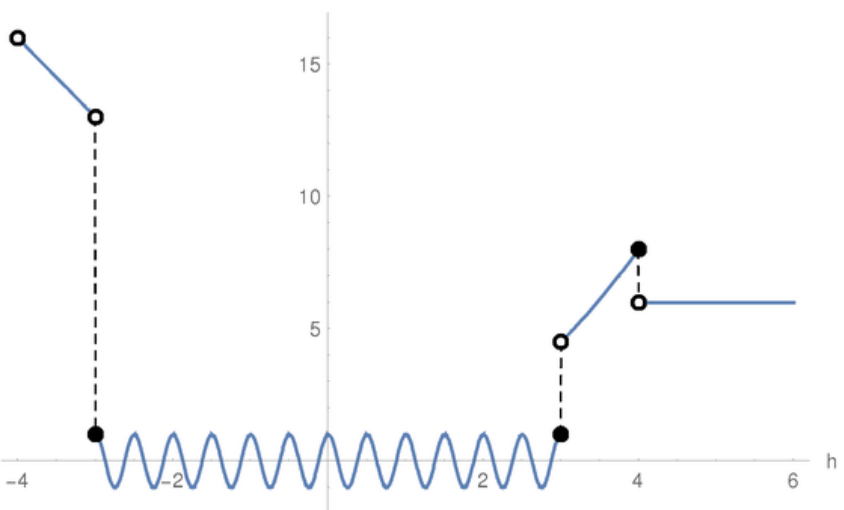
where two functions are glued together, and for that matter could be pieced differently i.e. swapped:

$$\begin{cases} 4 - 3h & -3 \le h \le 3 \\ \cos(4\pi h) + 5 & 3 < h \le 4 \end{cases}$$



More and more complicated functions could be glued together:

$$\begin{cases} 4 - 3h & -4 < h < -3 \\ \cos(4\pi h) & -3 \le h \le 3 \\ \frac{h^2}{2} & 3 < h \le 4 \\ 6 & h > 4 \end{cases}$$



Solid disk refers to inclusion of the point or any of $\leqslant$ $\geqslant$ $=$ operators

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

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