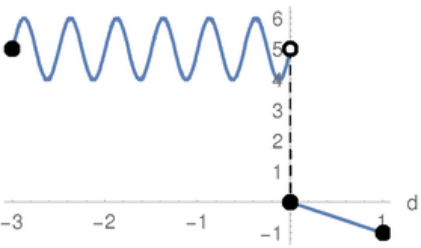
Piecewise Functions

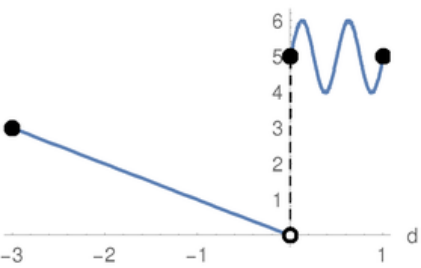
To define piecewise means that the function values and graphs are defined over a particular and generally limited section of the d-axis

$$\begin{cases} \sin(4\pi d) + 5 & -3 \le d < 0 \\ -d & 0 \le d \le 1 \end{cases}$$



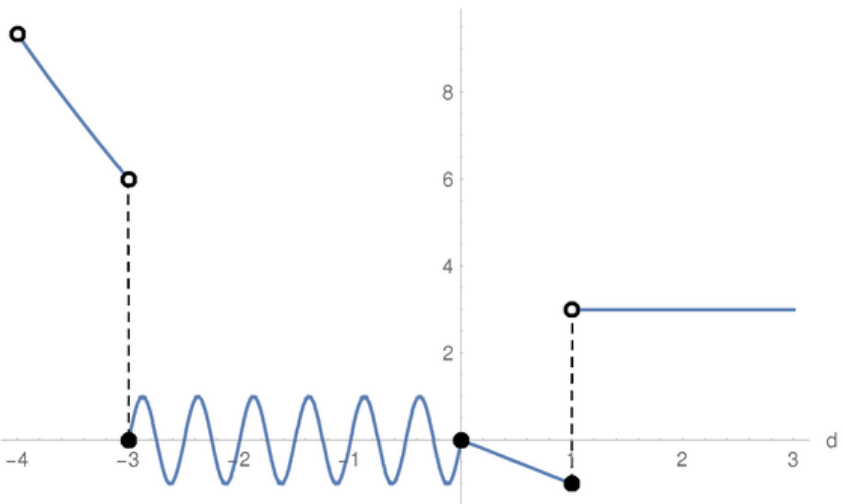
where two functions are stitched together, and for that matter could be pieced differently i.e. swapped:

$$\begin{cases} -d & -3 \le d < 0 \\ \sin(4\pi d) + 5 & 0 \le d \le 1 \end{cases}$$



More and more complicated functions could be stitched together:

$$\begin{cases} \frac{d^2}{3} - d & -4 < d < -3 \\ \sin(4\pi d) & -3 \le d < 0 \\ -d & 0 \le d \le 1 \\ 3 & d > 1 \end{cases}$$



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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