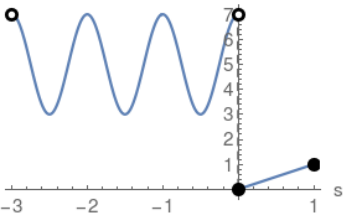
Piecewise Functions

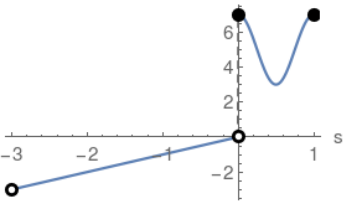
To define piecewise means that the function values and graphs are defined over a particular and generally limited section of the s-axis

$$\begin{cases} 2\cos(2\pi s) + 5 & -3 < s < 0 \\ s & 0 \le s \le 1 \end{cases}$$



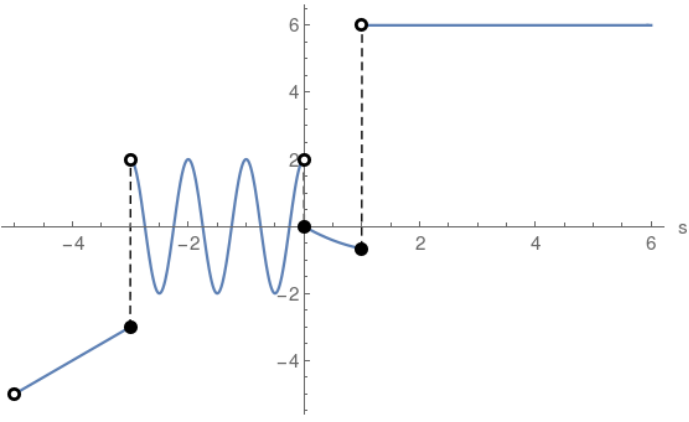
where two functions are pieced together, and for that matter could be pieced differently i.e. swapped:

$$\begin{cases} s & -3 < s < 0 \\ 2\cos(2\pi s) + 5 & 0 \le s \le 1 \end{cases}$$



More and more complicated functions could be pieced together:

$$\begin{cases} s & -5 < s \le -3 \\ 2\cos(2\pi s) & -3 < s < 0 \\ \frac{s^2}{3} - s & 0 \le s \le 1 \\ 6 & s > 1 \end{cases}$$



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

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

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