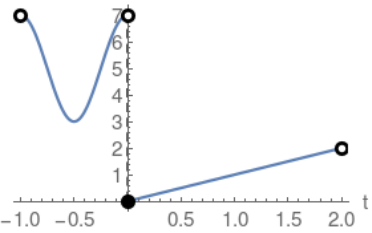
Piecewise Functions

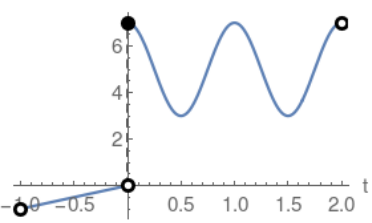
To define piecewise means that the function values and graphs are defined over a particular and generally limited section of the t-axis

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



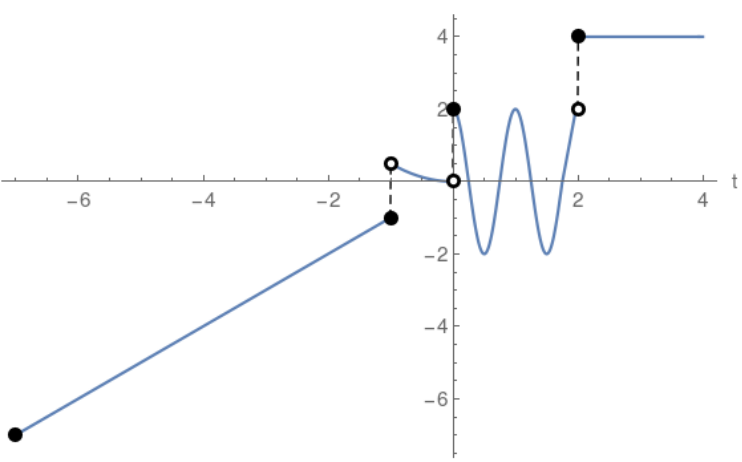
where two functions are placed together, and for that matter could be pieced differently i.e. swapped:

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



More and more complicated functions could be placed together:

$$\begin{cases} t & -7 \le t \le -1 \\ \frac{t^2}{2} & -1 < t < 0 \\ 2\cos(2\pi t) & 0 \le t < 2 \\ 4 & t \ge 2 \end{cases}$$



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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