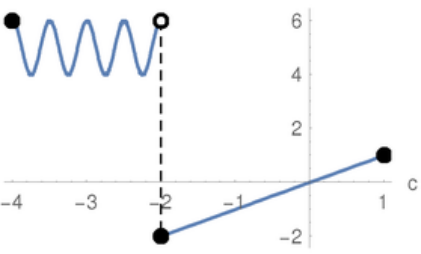
Piecewise Functions

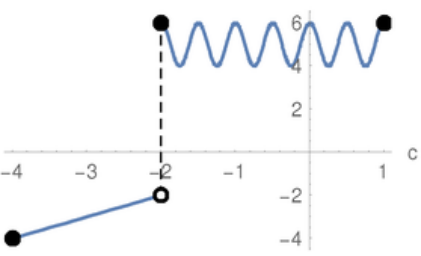
To define piecewise means that the function values and graphs are defined over a particular and generally limited section of the c-axis

$$\begin{cases} \cos(4\pi c) + 5 & -4 \le c < -2 \\ c & -2 \le c \le 1 \end{cases}$$



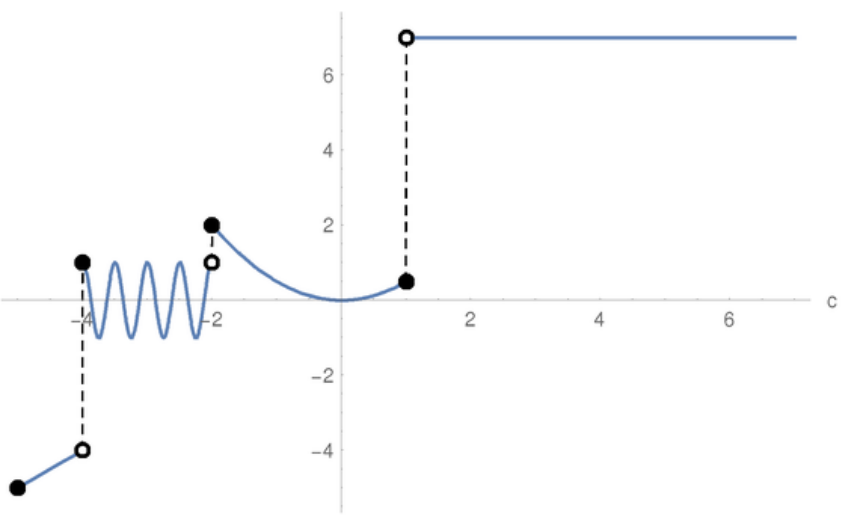
where two functions are pieced together, and for that matter could be pieced differently i.e. swapped:

$$\begin{cases} c & -4 \le c < -2 \\ \cos(4\pi c) + 5 & -2 \le c \le 1 \end{cases}$$



More and more complicated functions could be pieced together:

$$\begin{cases} c & -5 \le c < -4 \\ \cos(4\pi c) & -4 \le c < -2 \\ \frac{c^2}{2} & -2 \le c \le 1 \\ 7 & c > 1 \end{cases}$$



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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