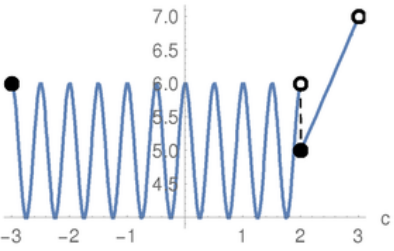
Piecewise Functions

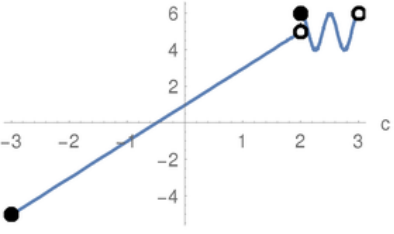
To define piecewise means that the function values and graphs are defined over a particular and generally limited section of the c-axis

$$\begin{cases} \cos(4\pi c) + 5 & -3 \le c < 2 \\ 2c + 1 & 2 \le c < 3 \end{cases}$$



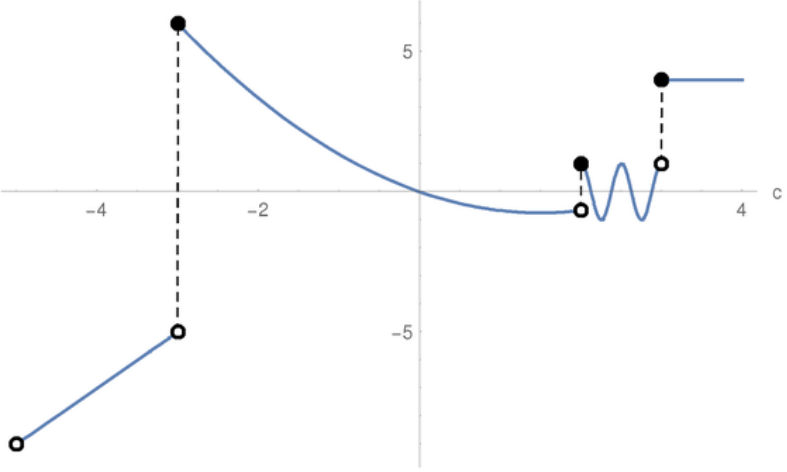
where two functions are pieced together, and for that matter could be pieced differently i.e. swapped:

$$\begin{cases} 2c + 1 & -3 \le c < 2 \\ \cos(4\pi c) + 5 & 2 \le c < 3 \end{cases}$$



More and more complicated functions could be pieced together:

$$\begin{cases} 2c + 1 & -5 < c < -3 \\ \frac{c^2}{3} - c & -3 \le c < 2 \\ \cos(4\pi c) & 2 \le c < 3 \\ 4 & c \ge 3 \end{cases}$$



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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