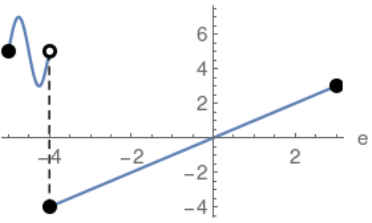
Piecewise Functions

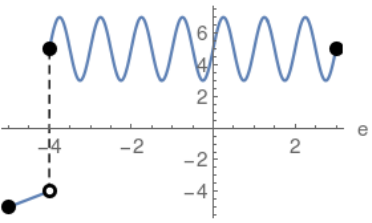
To define piecewise means that the function values and graphs are defined over a particular and generally limited section of the e-axis

$$\begin{cases} 2\sin(2\pi e)+5 & -5 \le e < -4 \\ e & -4 \le e \le 3 \end{cases}$$



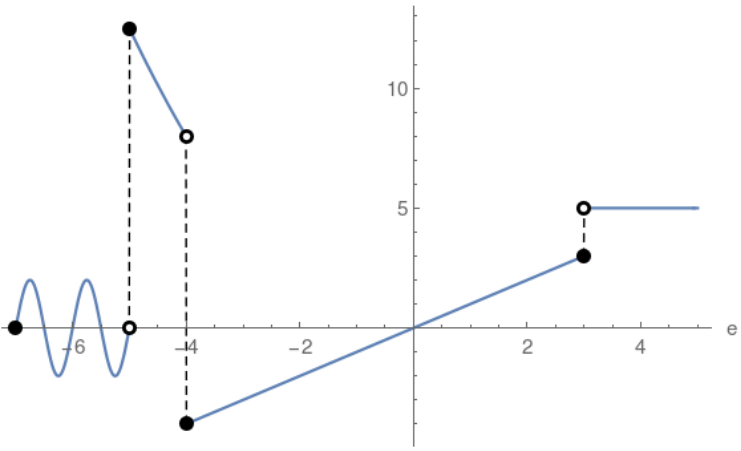
where two functions are pieced together, and for that matter could be pieced differently i.e. swapped:

$$\begin{cases} e & -5 \le e < -4 \\ 2\sin(2\pi e)+5 & -4 \le e \le 3 \end{cases}$$



More and more complicated functions could be pieced together:

$$\begin{cases} 2\sin(2\pi e) & -7 \le e < -5 \\ \frac{e^2}{2} & -5 \le e < -4 \\ e & -4 \le e \le 3 \\ 5 & e > 3 \end{cases}$$



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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