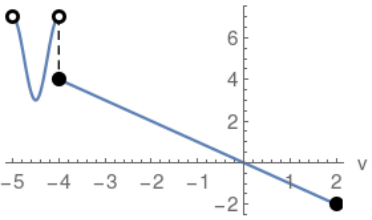
Piecewise Functions

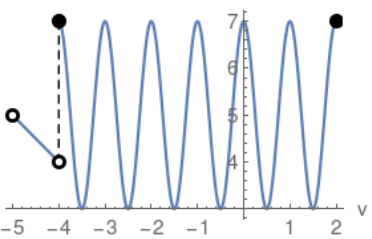
To define piecewise means that the function values and graphs are defined over a particular and generally limited section of the v-axis

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



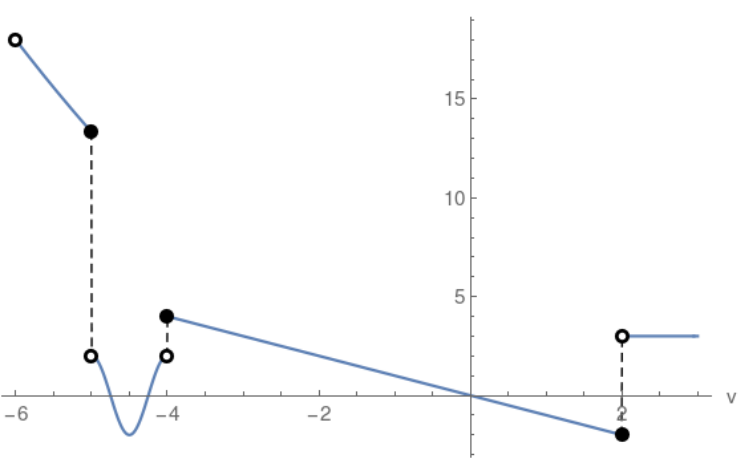
where two functions are placed together, and for that matter could be pieced differently i.e. swapped:

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



More and more complicated functions could be placed together:

$$\begin{cases} \frac{v^2}{3} - v & -6 < v \le -5 \\ 2\cos(2\pi v) & -5 < v < -4 \\ -v & -4 \le v \le 2 \\ 3 & v > 2 \end{cases}$$



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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