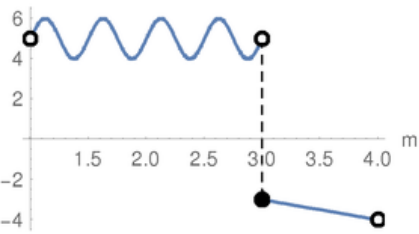
Piecewise Functions

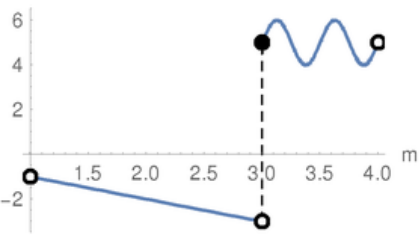
To define piecewise means that the function values and graphs are defined over a particular and generally limited section of the m-axis

$$\begin{cases} \sin(4\pi m) + 5 & 1 < m < 3 \\ -m & 3 \le m < 4 \end{cases}$$



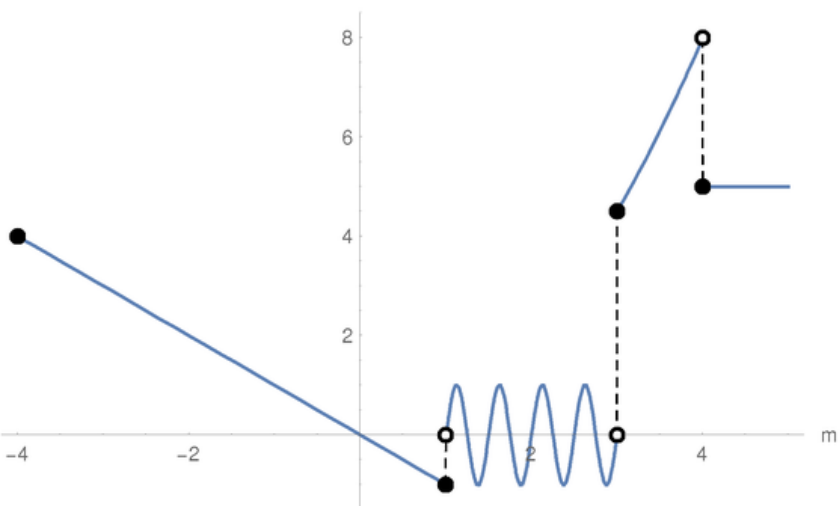
where two functions are pieced together, and for that matter could be pieced differently i.e. swapped:

$$\begin{cases} -m & 1 < m < 3 \\ \sin(4\pi m) + 5 & 3 \le m < 4 \end{cases}$$



More and more complicated functions could be pieced together:

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



Solid disk refers to inclusion of the point or any of $\leqslant$ $\geqslant$ $=$ operators

●

Hollow disk refers to the exclusion or any of the $<$ $>$ operators

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