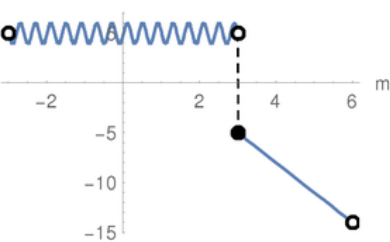


Piecewise Functions

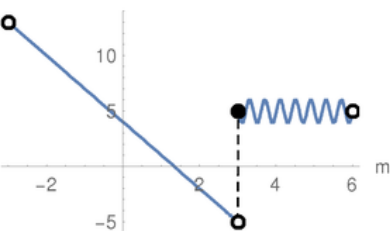
To define piecewise means that the function values and graphs are defined over a particular and generally limited section of the m-axis

$$\begin{cases} \sin(5\pi m) + 5 & -3 < m < 3 \\ 4 - 3m & 3 \leq m < 6 \end{cases}$$



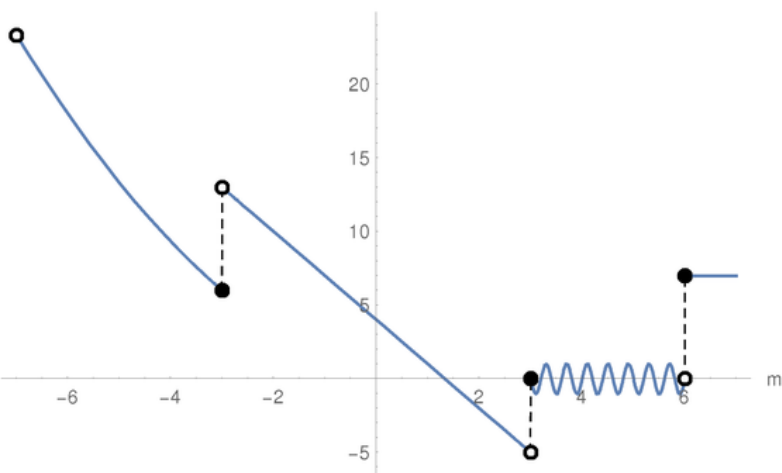
where two functions are stitched together, and for that matter could be pieced differently i.e. swapped:

$$\begin{cases} 4 - 3m & -3 < m < 3 \\ \sin(5\pi m) + 5 & 3 \leq m < 6 \end{cases}$$



More and more complicated functions could be stitched together:

$$\begin{cases} \frac{m^2}{3} - m & -7 < m \leq -3 \\ 4 - 3m & -3 < m < 3 \\ \sin(5\pi m) & 3 \leq m < 6 \\ 7 & m \geq 6 \end{cases}$$



Solid disk corresponds to inclusion of the point or any of $\leq \geq =$ operators



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

