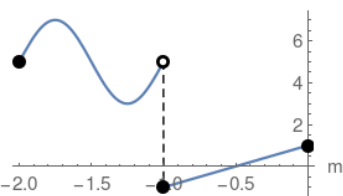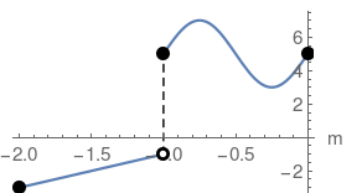# Piecewise Functions

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

$$\begin{cases} 2\sin(2\,\pi\,m) + 5 & -2 \le m < -1 \\ 2\,m + 1 & -1 \le m \le 0 \end{cases}$$
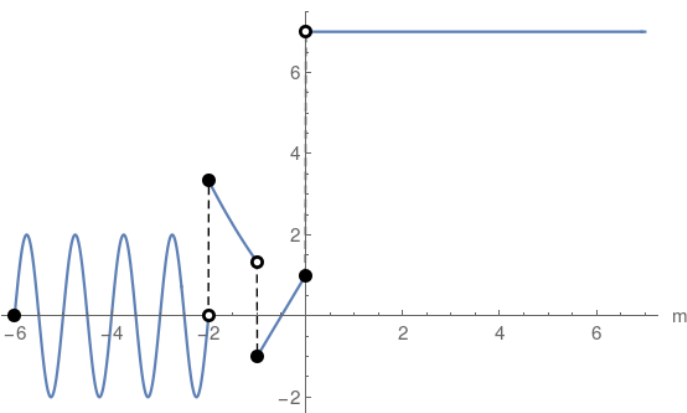

where two functions are placed together, and for that matter
could be pieced differently i.e. swapped:

$$\begin{cases} 2\,m + 1 & -2 \le m < -1 \\ 2\sin(2\,\pi\,m) + 5 & -1 \le m \le 0 \end{cases}$$

More and more complicated functions could be placed together:

$$\begin{cases} 2\sin(2\,\pi\,m) & -6 \le m < -2 \\ \dfrac{m^2}{3} - m & -2 \le m < -1 \\ 2\,m + 1 & -1 \le m \le 0 \\ 7 & m > 0 \end{cases}$$

Solid disk corresponds to inclusion of the point or any of ⩽ ⩾ = operators
●

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