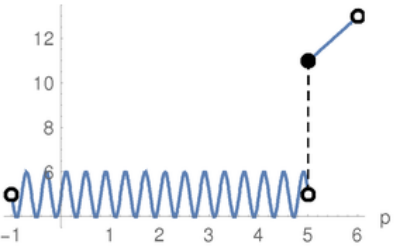
Piecewise Functions

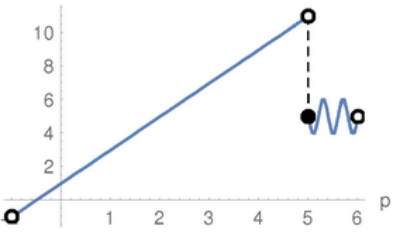
To define piecewise means that the function values and graphs are defined over a particular and generally limited section of the p-axis

$$\begin{cases} \sin(5\pi p) + 5 & -1 < p < 5 \\ 2p + 1 & 5 \le p < 6 \end{cases}$$



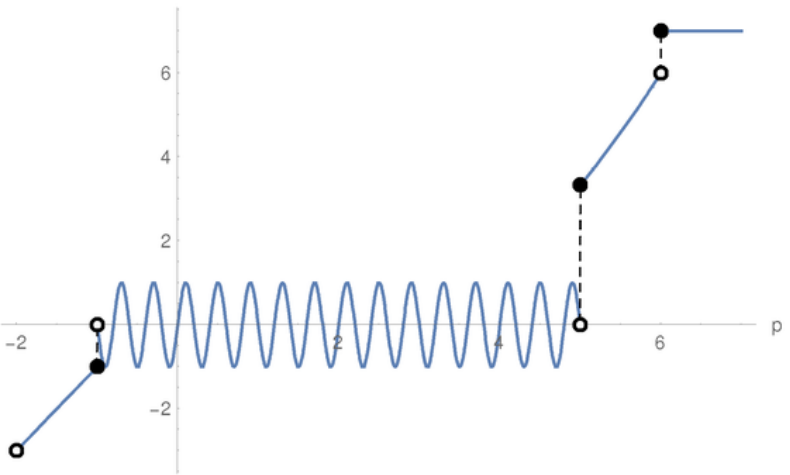
where two functions are juxtaposed together, and for that matter could be pieced differently i.e. swapped:

$$\begin{cases} 2p + 1 & -1 < p < 5 \\ \sin(5\pi p) + 5 & 5 \le p < 6 \end{cases}$$



More and more complicated functions could be juxtaposed together:

$$\begin{cases} 2p + 1 & -2 < p \le -1 \\ \sin(5\pi p) & -1 < p < 5 \\ \frac{p^2}{3} - p & 5 \le p < 6 \\ 7 & p \ge 6 \end{cases}$$



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

●

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

○