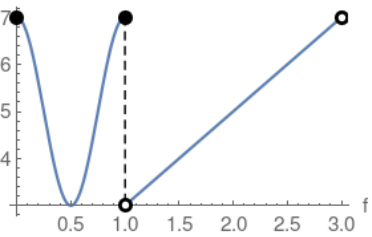
# Piecewise Functions

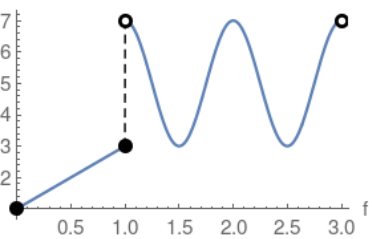
To define piecewise means that the function values and graphs are defined over a particular and generally limited section of the f-axis

$$\begin{cases} 2\cos(2\pi f) + 5 & 0 \le f \le 1 \\ 2f + 1 & 1 < f < 3 \end{cases}$$



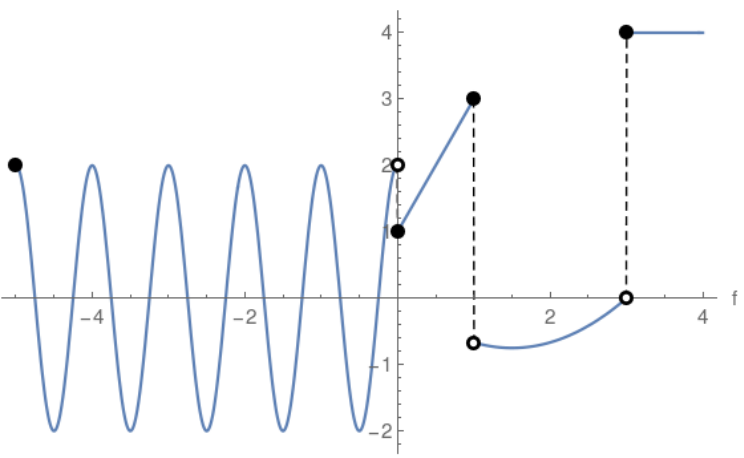

where two functions are glued together, and for that matter could be pieced differently i.e. swapped:

$$\begin{cases} 2f + 1 & 0 \le f \le 1 \\ 2\cos(2\pi f) + 5 & 1 < f < 3 \end{cases}$$




More and more complicated functions could be glued together:

$$\begin{cases} 2\cos(2\pi f) & -5 \le f < 0 \\ 2f + 1 & 0 \le f \le 1 \\ \frac{f^2}{3} - f & 1 < f < 3 \\ 4 & f \ge 3 \end{cases}$$




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

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

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