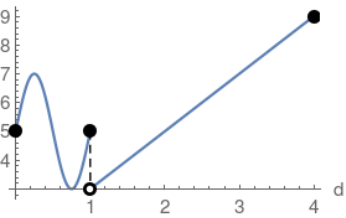
Piecewise Functions

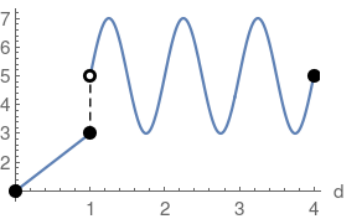
To define piecewise means that the function values and graphs are defined over a particular and generally limited section of the d-axis

$$\begin{cases} 2\sin(2\pi d) + 5 & 0 \le d \le 1 \\ 2d + 1 & 1 < d \le 4 \end{cases}$$



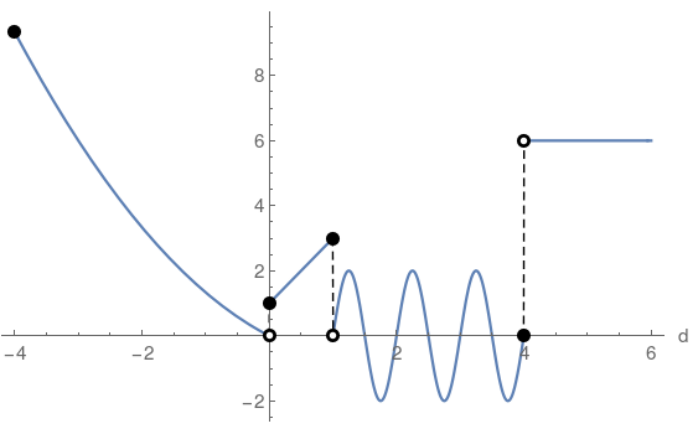
where two functions are glued together, and for that matter could be pieced differently i.e. swapped:

$$\begin{cases} 2d + 1 & 0 \le d \le 1 \\ 2\sin(2\pi d) + 5 & 1 < d \le 4 \end{cases}$$



More and more complicated functions could be glued together:

$$\begin{cases} \frac{d^2}{3} - d & -4 \le d < 0 \\ 2d + 1 & 0 \le d \le 1 \\ 2\sin(2\pi d) & 1 < d \le 4 \\ 6 & d > 4 \end{cases}$$



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

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

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