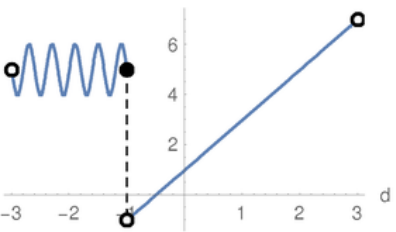
Piecewise Functions

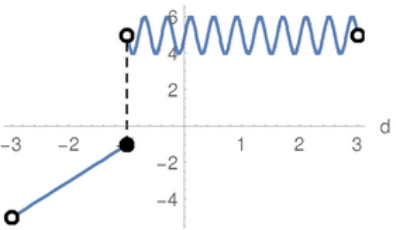
To define piecewise means that the function values and graphs are defined over a particular and generally limited section of the d-axis

$$\begin{cases} \sin(5\pi d) + 5 & -3 < d \leq -1 \\ 2d + 1 & -1 < d < 3 \end{cases}$$



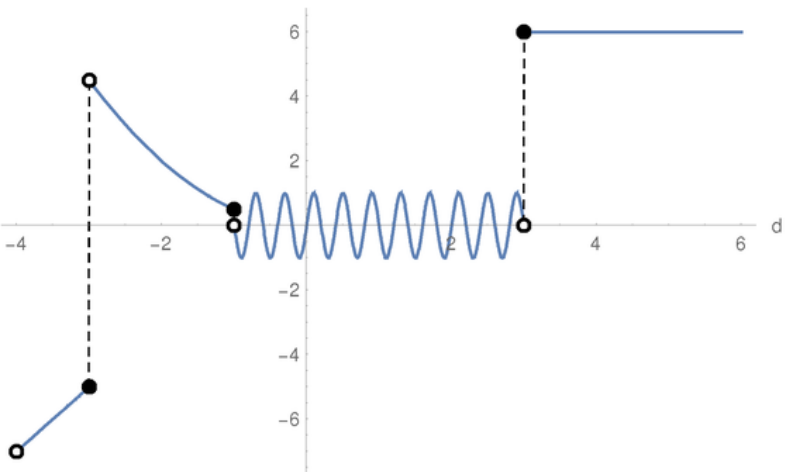
where two functions are glued together, and for that matter could be pieced differently i.e. swapped:

$$\begin{cases} 2d + 1 & -3 < d \leq -1 \\ \sin(5\pi d) + 5 & -1 < d < 3 \end{cases}$$



More and more complicated functions could be glued together:

$$\begin{cases} 2d + 1 & -4 < d \leq -3 \\ \frac{d^2}{2} & -3 < d \leq -1 \\ \sin(5\pi d) & -1 < d < 3 \\ 6 & d \geq 3 \end{cases}$$



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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