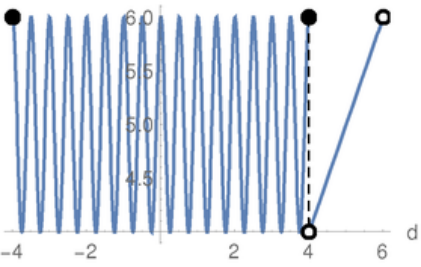
Piecewise Functions

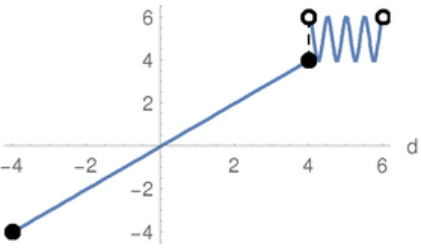
To define piecewise means that the function values and graphs are defined over a particular and generally limited section of the d-axis

$$\begin{cases} \cos(4\pi d) + 5 & -4 \le d \le 4 \\ d & 4 < d < 6 \end{cases}$$



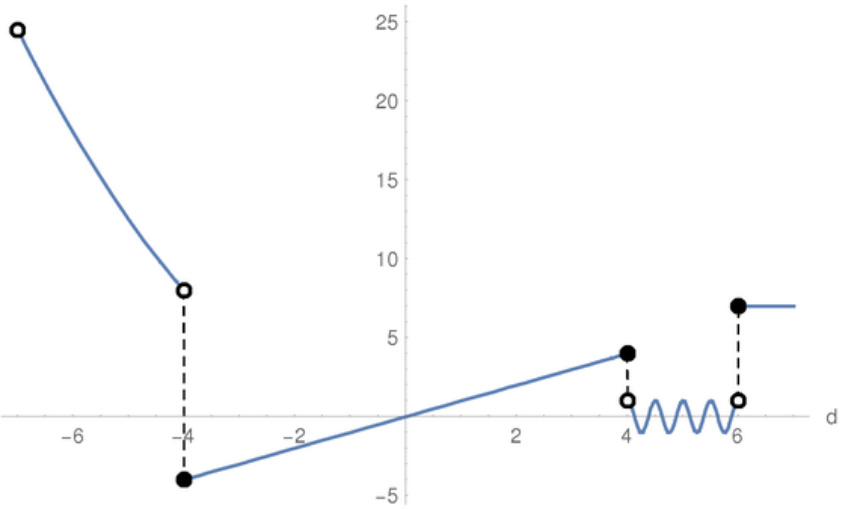
where two functions are juxtaposed together, and for that matter could be pieced differently i.e. swapped:

$$\begin{cases} d & -4 \le d \le 4 \\ \cos(4\pi d) + 5 & 4 < d < 6 \end{cases}$$



More and more complicated functions could be juxtaposed together:

$$\begin{cases} \frac{d^2}{2} & -7 < d < -4 \\ d & -4 \le d \le 4 \\ \cos(4\pi d) & 4 < d < 6 \\ 7 & d \ge 6 \end{cases}$$



Solid disk refers to inclusion of the point or any of $\leqslant$ $\geqslant$ $=$ operators

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

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