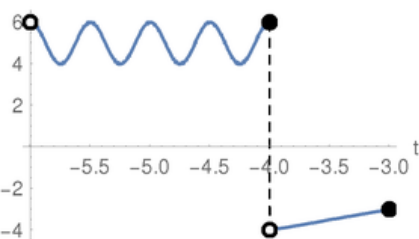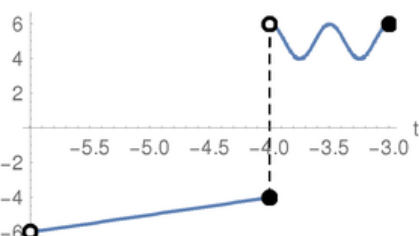# Piecewise Functions

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

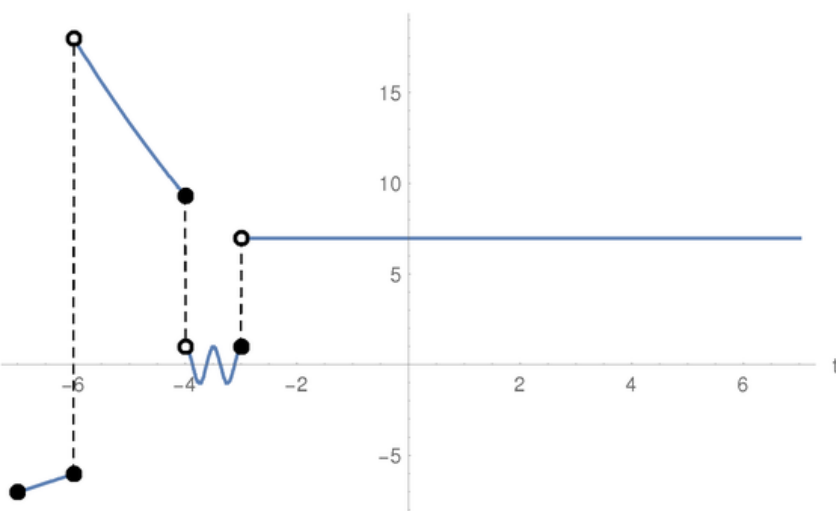$$\begin{cases} \cos(4\pi t) + 5 & -6 < t \le -4 \\ t & -4 < t \le -3 \end{cases}$$

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

$$\begin{cases} t & -6 < t \le -4 \\ \cos(4\pi t) + 5 & -4 < t \le -3 \end{cases}$$

More and more complicated functions could be glued together:

$$\begin{cases} t & -7 \le t \le -6 \\ \frac{t^2}{3} - t & -6 < t \le -4 \\ \cos(4\pi t) & -4 < t \le -3 \\ 7 & t > -3 \end{cases}$$

<mark>Solid disk</mark> refers to inclusion of the point or any of $\le \ge =$ operators

●

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

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