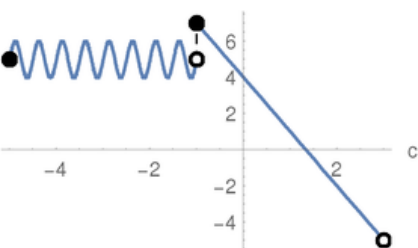# Piecewise Functions
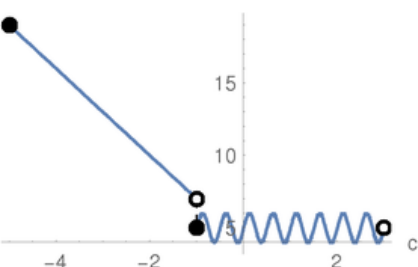
 To define piecewise means that the function values and graphs
are defined over a particular and generally limited
section of the c-axis

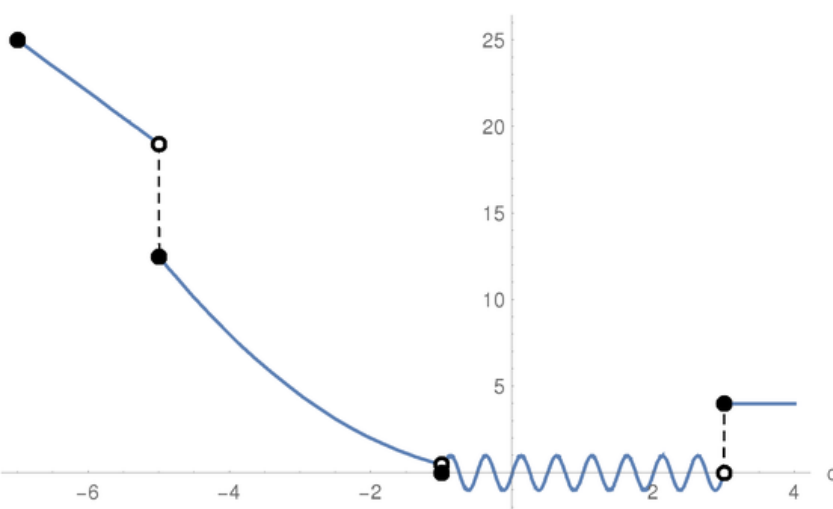$$\left[\begin{array}{ll} \sin(4\pi c) + 5 & -5 \le c < -1 \\ 4 - 3c & -1 \le c < 3 \end{array}\right.$$

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

$$\left[\begin{array}{ll} 4 - 3c & -5 \le c < -1 \\ \sin(4\pi c) + 5 & -1 \le c < 3 \end{array}\right.$$

More and more complicated functions could be glued together:

$$\left[\begin{array}{ll} 4 - 3c & -7 \le c < -5 \\ \frac{c^2}{2} & -5 \le c < -1 \\ \sin(4\pi c) & -1 \le c < 3 \\ 4 & c \ge 3 \end{array}\right.$$

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

●

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

○