Piecewise Functions

Conventions:

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

Example 1.

$$\left\{ \begin{array}{lll} 2\;u+1 & -1 < u \leq 0 \\ -2\;u-1 & 0 < u \leq 1 \end{array} \right.$$