Date No.

$(x_1 \vee x_2 \vee x_3)$

x_1: $\triangle$ $\bigcirc$

$\neg x_1$: $\triangle$ $\longleftarrow$ Here we do not include a socket because $\neg x_1$ is not in the clause.

x_2: $\triangle$ $\bigcirc$

$\neg x_2$: $\triangle$

x_3: $\triangle$ $\bigcirc$

$\neg x_3$: $\triangle$

Note that if one of these sockets are powered, all the sockets in that column is powered. Even if it is the middle socket that is powered, we can do a simple reordering to observe the rules of no two wires can be drawn, but that is not a concern of this mapping. For example:

$(x_1 \vee \dot{x}_2 \vee x_3)$

x_1: $\triangle$ ϟ

$\neg x_1$: $\triangle$

x_2: $\triangle$ ϟ

$\neg x_2$: $\triangle$

x_3: $\triangle$ ϟ

$\neg x_3$:

If x_1 socket is powered, a wire can be drawn to a socket below it, and this will hold for subsequent sockets underneath it. Therefore, $(x_1 \vee x_2 \vee x_3)$ is true if any one literal is true, and this holds for PLUG IT