## Homework \#9 Digital Logic Gates

1)a) Fill out the truth table for the following circuit.
b) What do you think this circuit is (what could it be used for)?

2) Use logic gates to construct a circuit such that it matches the following truth table.

It may be helpful to look at how to simplify using Karnaugh Maps:
https://www.allaboutcircuits.com/technical-articles/karnaugh-map-boolean-algebraic-simplification-technique/
$\mathrm{ABC} \mid \mathrm{D}$
$000 \mid 0$
$001 \mid 0$
$010 \mid 0$
$011 \mid 1$
$100 \mid 1$
$101 \mid 1$
$110 \mid 1$
$111 \mid 1$

