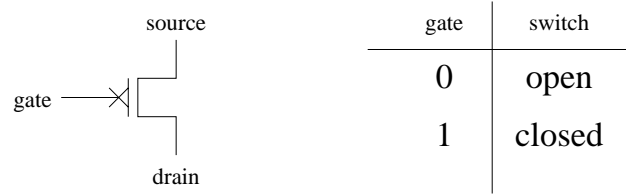


### X-Type Switch

For this problem, assume a new switch type has been created: an X-type switch. An X-type switch closes when its gate voltage is high, but it can pull high *or* low. You may use the signals  $(A, B, C)$  and their complements  $(\overline{A}, \overline{B}, \overline{C})$ .



Using only X-type switches, design a three-input NAND and NOR gate,