Quiz #4

No books, no notes
no electronics except for clicker
Question #1: 2 min

In a two-gate half adder circuit, which of the listed gates produces a Carry output?

A. AND
B. OR
C. XOR
D. NAND
E. None of the above
What type of circuit is illustrated in the figure?

A. Full Adder
B. Demultiplexer
C. Multiplexerer
D. Equality Comparator
E. None of the above
This circuit is a:
A. Mux implementing a Decoder
B. Decoder implementing a Mux
C. Decoder implementing a function of four variables
D. Two of the above
E. None of the above
Which statement is true when S and R are both 1 in an SR latch?

A. The output Q is 0 when the previous value of Q' was 0, otherwise it is 1.
B. The output Q is 0 and Q' is 1.
C. The output is invalid.
D. None of the above.
The following is true for this ALU bit slice:

A. If $f[2:0]=111$, then $S_i = a_i + b_i$
B. If $f[2:0]=011$, then $S_i = a_i - b_i$
C. If $f[2:0]=100$, then $S_i = a_i \text{ xor } b_i'$
D. Two or more of the above
E. None of the above