Let \( x \) be an integer state variable. Is the following specification implementable?

(a) \( x \geq 0 \implies x' \leq 0 = x \)
§ No, not implementable. When \( x = 2 \), we require an integer \( x' \) whose square is 2. There isn't one.

(b) \( x' \geq 0 \implies x = 0 \)
§ Yes, implementable. \( x' = -1 \) is satisfactory for any \( x \).

(c) \( \neg (x \geq 0 \land x' = 0) \)
§ Yes, implementable. \( x' = 1 \) is satisfactory for any \( x \).

(d) \( \neg (x \geq 0 \lor x' = 0) \)
§ No, not implementable. When \( x = 0 \), there is no satisfactory \( x' \).