Let $x$ be an integer state variable. Which of the following specifications are implementable?

(a) $x \geq 0 \implies x' \sqsupseteq 2 = x$
§ 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 $x'$.