Moving an Object

Below is a data definition and multiple next-state-tick functions for a PositionState. Select which of the next-state-tick functions will have the following effects on the animation:

The object stays in the same position
The object moves diagonally, down and to the right
The object moves diagonally, up and to the left
The object moves up
The object jumps back and forth between the same two points

# A PositionState is an x and y coordinate
data PositionState:
    | posn(x :: Number, y :: Number)
end

# next-state-tick: PositionState -> PositionState
# Consumes a position and produces the next position

|   | fun next-state-tick(p):
|---|----------------------------------
| A | posn(p.x, p.y + 10) end          
| B | posn(p.x, p.y) end               
| C | posn(p.x + 8, p.y - 4) end       
| D | posn(p.x, p.y * -1) end          
| E | posn(p.x - 8, p.y + 4) end       