

# 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

B

The object moves diagonally, down and to the right

C

The object moves diagonally, up and to the left

E

The object moves up

A

The object jumps back and forth between the same two points

D

```
# 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
```

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