

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
```

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