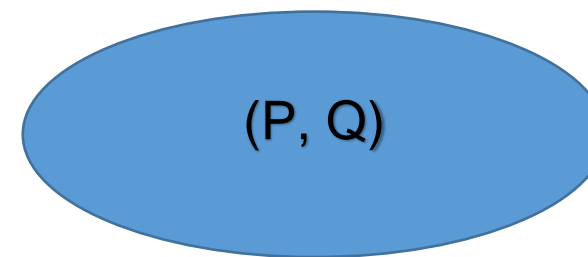


### State Representation:



Where

P: = Left coordinate of Scale 1

Q: = Left coordinate of Scale 2

From (P, Q), at each step left, middle and right side measurement can be obtained.

For obtaining left, middle and right measurement:

Here,

Scale 1 = 7 inch

Scale 2 = 5 inch

Left = |(x coordinate of left side of scale 1) - (x coordinate of left side of scale 2) |

Middle = | (x coordinate of left side of scale 1 + size of scale 1) – (x coordinate of left side of scale 2) |

Right= |(x coordinate of left side of scale 1 + size of scale 1) - (x coordinate of left side of scale 2 + size of scale 2)|

State Mapping Tree :

Actions taken at each node (from left to right):

- 1. Turn over Scale 1 to Left
- 2. Turn over Scale 2 to Left
- 3. Turn over Scale 1 to Right
- 4. Turn over Scale 2 to Right

