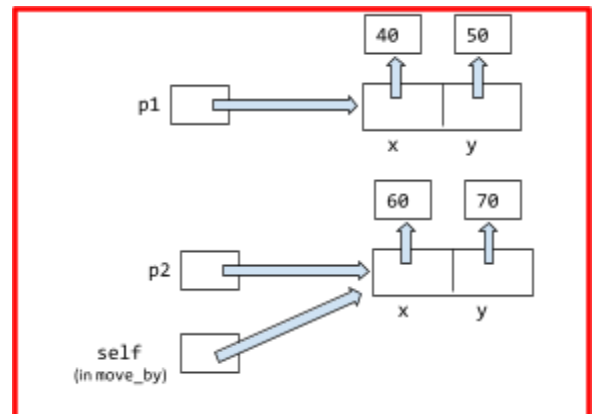


Name: _____ **SOLUTION** _____ CM: _____ Section: _____ Grade: _____ of 10

Here (below) is a partial definition and test code for a simple **Point** class (as you saw/worked in a previous session).

<pre># Tests the Point class p1 = Point(40, 50) Point(60, 70) print(p1, p2) p2.move_by(1, 2) print(p1, p2) a = p1.get_number_of_moves() b = p2.get_number_of_moves() print(a, b)</pre>	<pre>class Point(object): def __init__(self, x, y): self.x = x self.y = y self.total_moves = 0 def move_by(self, dx, dy): # Location 1 self.x = self.x + dx self.y = self.y + dy self.total_moves = self.total_moves + 1 def __repr__(self): return "Point({}, {})".format(self.x, self.y) def get_number_of_moves(self): # Location 2 return self.total_moves</pre>
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1. We want the `__repr__` method to print the current `x` and `y` coordinates of its `Point`, formatted nicely. Fill in the blanks above in `__repr__` to make it do that. See above.
2. In the space to the right, draw a box-and-point diagram that shows the values of `p1`, `p2`, and `self` when the code gets to **Location 1**.
3. Fill in the blank in `__init__` to set `self.total_moves` to its correct value. See above.
4. There is a small but important bug inside the `get_number_of_moves` method. What is it? See above.



5. When the test code runs and gets to **Location 2** the FIRST time, what is the value of `self`? The object called `p1` in the test code.
What is the value of `self` when we get to Location 2 the SECOND time?
The object called `p2` in the test code.

```
Point(40, 50) Point(60, 70)
Point(40, 50) Point(61, 72)
0 1
```

6. Assume that all the code works as intended (that is, assume that the bug in `get_number_of_moves` is fixed). In the space to the right, show the output of the test code.
7. Are you very, very confident that you know **what lines of code execute, in what order**, when the test code runs? That you **understand what `self` is and why its use `** attaches data **` to `Point` objects?**

Yes No (if *No*, then talk with an assistant or your instructor about this quiz). **Talk with student if No.**