

Q1 What instance attribute was added to the Tile class to represent the dimensions of a Tile object?

`self.border_width`

Q2 What are the two new instance attribute(s) that were added to the Game class of Tic Tac Toe?

`self.board_size` and `self.board`

Q3 How are we representing a 3x3 grid in the Tic Tac Toe game?

as a list of lists

Q4. Write a program that creates a list of lists that represents a 3 x3 grid. Each item in a row of the grid is a tuple that has the (row number,column number) of the grid. Here is the expected output from the program:

```
3 x 3 Grid
[(0, 0), (0, 1), (0, 2)], [(1, 0), (1, 1), (1, 2)], [(2, 0), (2, 1), (2, 2)]
```

```
list = []
for row_index in range(0, 3):
    row = []
    for col_index in range(0, 3):
        tuple = (row_index, col_index)
        row.append(tuple)
    list.append(row)
```

Q5 Write a program that goes through the 3x3 grid created in the previous question and prints each item of the row on a separate line. Here is the expected output from the program:

```
Row Items
(0, 0)
(0, 1)
(0, 2)
(1, 0)
(1, 1)
(1, 2)
(2, 0)
(2, 1)
(2, 2)
```

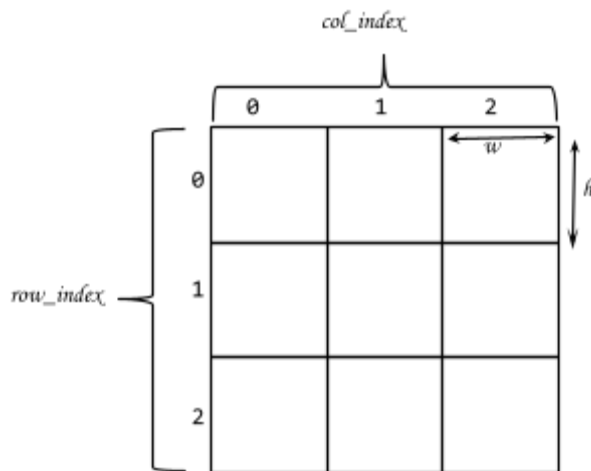
```
for row in list:
    for tuple in row:
        print(tuple, '\n', end="")
```

Q6 Assume we have a uniform grid of 3 x 3 tiles that occupies the entire surface of a window. If the width of the surface is a and the height of the surface is b , what would be the width and height of each tile in the grid?

width of each tile = $a // 3$

height of each tile = $b // 3$

Q7 Refer to the 3x3 uniform grid of tiles given below. If the width of EACH tile is w and the height is h , then what are the top left coordinates of each tile in the grid. Write the top left coordinates for each tile in the given grid.



Q8 After completing the above question, observe the pattern of change in the x, y coordinates of the top left corner of the tiles. Write a general formula that can be used to compute the top left x, y coordinates of any tile using row_index , col_index , w and h of a tile.

$x = w * col_index$

$y = h * row_index$