

Battleship

Reference the following code for the next few questions. The code correctly draws a map, but does not draw an X where the user guesses due to a bug.

```
def draw(x, y, M = 8, N = 6):
    i = 0
    while i < M:
        j = 0
        while j < N:
            if y == i and x == j:
                print("X", end = "")
            else:
                print(".", end = "")
            j += 1
        print() # just a newline because end="\n" by default
        i += 1

x = input("enter x: ")
y = input("enter y: ")
draw(x, y)
```

1. Assume the user types 3 and 4.0 as input; what will the types of the values in global variables `x` and `y` be, respectively?
A. int, int B. int, float C. float, float D. str, str
2. What call would print a map with an X in the top-left corner?
A. `draw(0, 0)` B. `draw(1, 1)` C. `draw(M = 1, N = 1)` D. `draw("top", "left")`
3. Calling `draw(-1, -1)` prints the equivalent of what?
A. `print("." * (8*6))`
B. `print(("."*6 + "\n") * 8)`
C. `print(("."*8 + "\n") * 6)`
D. `print("X" + ("."*8 + "\n") * 6)`
E. `print(("."*8 + "\n") * 6 + "X")`
4. Which parameter to `draw` represents the width of the map?
A. `x` B. `y` C. `M` D. `N`

Tic-Tac-Toe

The following code attempts to draw a tic-tac-toe board.

```
X| |  
-+-+--  
| |  
-+-+--  
| |
```

```
def draw(x = 0, y = 0, move = "X"):  
    i = 1  
    while(i < 6):  
        if i%2 == 0:  
            print("-+-+--", end = "")  
        else:  
            j = 0  
            while j < 5:  
                if j % 2 != 0:  
                    print("|", end = "")  
                elif i == 2*x + 1 and j == 2*y:  
                    print(move, end="")  
                else:  
                    print(" ", end = "")  
                j += 1  
            print()  
            i += 1  
  
x = input("Enter x: ")  
y = input("Enter y: ")  
move = input("Enter move (X or O): ")
```

5. Assume the user provides 2, 1.0 and X as inputs to x, y, and move respectively. What will be the types of the values in global variables x, y, and move?
- A. int, int, float
 - B. int, float, float
 - C. str, str, str
 - D. int, float, str

6. What would the following function call evaluate to?

`draw(x = 2, move = "O")`

- A. "O" at the top-left corner of the board
- B. "O" at the bottom-left corner of the board
- C. "O" at the bottom-right corner of the board
- D. "O" at the top-right corner of the board
- E. "O" at the center of the board

7. Which of the following function calls would place an "O" at the bottom-right corner of the board?

- A. `draw(0, 0, "O")`
- B. `draw(2, 2)`
- C. `draw(1, 1, "O")`
- D. `draw(2, 2, "O")`
- E. `draw(3, 3, "O")`

8. What does the following function call evaluate to?

`draw(-1, -1)`

- A. Empty Board
- B. -1 at top-left corner
- C. "X" at bottom-right corner
- D. "X" at top left corner