

2.10 Implementing String Algorithms

Exit Ticket

Name: _____ Date: _____

Question 1 Tracing

Write the exact output.

```
1 String word = "banana";
2 int count = 0;
3 for (int i = 0; i <= word.length() - 3; i++)
4 {
5     if (word.substring(i, i + 3).equals("ana"))
6     {
7         count++;
8     }
9 }
10 System.out.println("ana appears " + count + " times");
```

Question 2 Multiple choice

The code below should say whether `password` contains a digit. What does it print?

```
1 String password = "tiger7x";
2 String digits = "0123456789";
3 boolean hasDigit = false;
4 for (int i = 0; i < password.length(); i++)
5 {
6     String letter = password.substring(i, i + 1);
7     if (digits.indexOf(letter) >= 0)
8     {
9         hasDigit = true;
10    }
11    else
12    {
13        hasDigit = false;
14    }
15 }
16 System.out.println("Has a digit: " + hasDigit);
```

- A. Has a digit: true
- B. Has a digit: false
- C. Nothing; it does not compile.

D. It throws a `StringIndexOutOfBoundsException`.

Question 3 Short answer

This code should print "drawer" backward. Does it compile? What happens when it runs, and how do you fix it?

```
1 String word = "drawer";
2 String reversed = "";
3 for (int i = word.length(); i >= 0; i--)
4 {
5     reversed += word.substring(i, i + 1);
6 }
7 System.out.println(reversed);
```