

Week 4

Method Basics

1. Describe the syntax of a method excluding modifiers.
2. Consider the following code:

```
public class CatchPokemon {
    public static void main(String[] args) {
        if(throwPokeBall()){
            // A
            System.out.println("Gotcha! The Pokemon was caught!");
        } else {
            // B
            System.out.println("Oh no! The Pokemon broke free!");
        }
        // C
    }

    public static boolean throwPokeBall(){
        // D
        if(Math.random() > 0.5){
            return true;
        } else {
            return false;
        }
    }
}
```

Which section of code is executed after `throwPokeBall()` is called from the `main` method? (A, B, C or D)

3. For the above program, if `throwPokeBall()` returns false and finishes executing, what is printed?
4. What does the `void` return type signify?
5. What is the purpose of creating methods?

Passing Parameters

1. Write a method with the following signature `public static boolean isOdd(int n)`, it should return `true` if the passed parameter is an odd number, `false` otherwise.
2. Consider the following code:

```
public class PokemonBattle {
    public static void main(String[] args) {
        boolean isBattle = true;
        String currentPokemon = "Gardevoir";

        if(isBattle){
            activateMega(currentPokemon);
        }
        System.out.println(currentPokemon);
    }

    public static void activateMega(String pokemon){
        pokemon = "Mega " + pokemon;
    }
}
```

```

    }
}

```

When the above program is run, what is printed?

- Write a program that requests the user to input an integer and then prints the square of the value. Include and use the following method signature in your program: `public static int square(int n)`. The program should loop until a negative value is entered.

Below is an example scenario:

```

Please enter an integer: 5
Square is ... 25
Please enter an integer: 10
Square is ... 100
Please enter an integer: -2
Quitting

```

Variable Scope

- Consider the following code:

```

public class SilphCo {
    int x = 10;

    public static void main(String[] args) {
        int y = 2;
        for(int z1 = 5; z1 < 10; z1++){
            // A
        }
        // B
    }

    public static void useSilphScope(){
        for(int z2 = 1; z2 < 100; z2++){
            // C
        }
        // D
    }
}

```

List the sections where variable `x` can be seen. (A, B, C and/or D)

- Similarly, for the above program, list where `y` can be seen.
- Similarly, list where `z1` can be seen.
- Similarly, list where `z2` can be seen.