

## Java Annotation

PROVIDE :: code snippets or comments you definitely want to provide

STUDENT-PROMPT :: a specifically-worded question you want to ask, or a general solicitation for input, etc

MUST-ANSWER-Q :: a question that must be resolved, that a majority of your class must understand before moving on

BIG IDEA :: an introduction of a new topic, a connection to prior lesson or discussion for application here in code, etc.

BEEG REVEAL :: this is gonna blow yer minds...

DELIBERATE-ERROR :: specific code snippet or a general approach that is a bad fit for the situation, is flat-out wrong, or will lead to a compile- or run-time error, etc.

FIRSTDRAFT :: code that will work for now, but which you intend to replace later

REVISION vX :: better versions of firstdraft code...

## BIG IDEA: Methods and Functions

*// FIRSTDRAFT: What else do we need in this code so we know the code works?*

```
public int rollADie()
```

```
// MUST-ANSWER-Q.... Why no parameters or inputs in ()?
```

```
//what is the purpose of the rollADie()? What does this do?
```

```
{
```

```
// Step 1: Create a random object to generate a random number
```

```
// from 1 - 6 to simulate a six sided die
```

```
Random r = new Random();
```

```
// PROMPT : should you use a more descriptive variable name instead of "r"?
```

```
int valueOfDie = r.nextInt(6)+1;
```

```
// STUDENT-PROMPT.. What does the + 1 do.
```

```
return valueOfDie;
```

```
// MUST-ANSWER-Q: why do we need to return?
```

```
}
```

**//why are the parameters integers? What type of parameters are needed?**

```
public int[] generateDiceRolls(int numberOfSimulations)
```

**//what is the purpose of the rollADie()? What does this do?**

```
{
```

```
    // what needs to be revised in the next line?
```

```
    int[] diceRolls = new int[simulations];
```

**//STUDENT PROMPT: Why would we need an array to generate dice simulations?**

```
    for (int i = 0; i < diceRolls.length; i++)
```

```
        // WHILE instead of for..while..loop
```

```
        // how can this be rewritten as a while loop?
```

```
    {
```

```
        // how do you call the method that rolls a dice?
```

```
        // how would you store that value in each element of the array?
```

```
        diceRolls[i] = RollADie();
```

```
    }
```

```
    //what are we missing here?
```

```
}
```

```
public int computeDiceSum(int[] values)
```

**//what is the purpose of the computeDiceSum()? What does this do?**

```
{
```

```
    // STUDENT PROMPT: where do we store the sum?
```

```
    int diceSums = 0;
```

```
    // “traverse the array” to access every element of that array?
```

```
    // what does “traverse the array” mean? Is it “traverse or transverse”?
```

```
    for (int i = 0; i < values.length; i++)
```

```
        //why do we use < instead of <= here?
```

```
    {
```

```
        diceSums = diceSums + values[i];
```

```
        // will diceSums += values[i] work?
```

```
    }
```

```
    return diceSums;
```

```
}
```

**//BIG REVEAL: using methods to reuse a code over and over again without having to write it out repetitively**