Key points in Java 101

* Java requires each statement to end with a comma (“;”)
* Blocks in Java are represented by brackets (“{“, “}”)
* Variables in Java need to be declared before using
* Three data types we will be dealing with in AP: int(integer), double(real number) and boolean(true, false)

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| Data type | Explanation |
| int | An integer. For example, 2, -26, 3000 |
| boolean | A boolean. Just two values, true or false |
| double | A double precision floating-point number.  For example, 2.718, -367189.41, 1.6e4 |

* Declaring variables:
  + int i; // <data type> <name>;
  + int i = 1; // <data type> <name> = <initial value>;
  + int i, j = 1; // <data type> <name1>, <name2> = <initial value2>;
* Casting: converting a variable’s value to a different data type
  + Casting a double to an int 🡪truncating ((int)(3.2) 🡪 3)
  + Java always uses the more precise data type in computation against variables of different data types.
  + Assigning an integer to a double causes no error, but not vice versa
* Division of two ints: division with remainders (3 / 2 🡪 1)
* Equality test of two doubles: |a – b| <
* Output in Java
  + System.out.println();
  + System.out.print();
* Control Structures
  + If
  + If … else
  + If … else if … else
  + Loops
    - For each
    - While
    - For
    - Nested loops
* Functions in Java are called methods
  + How to define methods
  + How to call methods
* Everything in Java lives in classes
  + How to wrap code in a class