Generate a random number between -5 and 20, a random even number from 2 to 10.

Random rand = new Random();

rand.nextInt(25) - 5; rand.nextInt(26) - 5

(rand.nextInt(5) + 1) \* 2;

Differences between a primitive type and a reference type.

Primitive type variables hold the value. Reference type variables hold a reference to the object of the same type.

Draw a diagram showing int variable a with value 5 and String variable s with value “Hello”. Show updated diagram after a = 7; and s = “Good bye”.

a [5]

s [ ] ----> [“Hello”]

a [7]

[“Hello”]

S [ ] ----> [“Good bye”]

Determine output for a segment of code like ex 2.3.

Here we go!12345

Test this if you are not sure.Another.

All done.

Translate pseudocode to Java code.

1. Input integers a and b

2. Output twice the sum of a and b

int a, b;

Scanner scan = new Scanner(System.in);

a = scan.nextInt();

b = scan.nextInt();

System.out.println(“The sum of a and b and multiple by 2 is “ + ((a + b) \* 2));

What is a constructor and how do you set one up?

The constructors of a class are special methods used to initialize instance data. A constructor must have the same name as the class and has no return type.

Explain why Math class is different from most other classes.

All methods in the Math class are static methods which means it does not need to create a Math object to be able to use methods in the Math class. We can use the methods through the class name with instantiate an object of Math class.

Set up a method that accepts some parameters and performs a task (for example, a method that receives two integer values and returns a floating-point average).

double average(int a, int b) {

return ((double) a + b) / 2;

}

When we draw a Rectangle with x = 100, y = 50, width = 200, height = 120, where does it go on a 600 by 400 window?

The left upper corner of the rectangle is located 100 from the left and 50 from the top. The width is 200 which extends 200 to the right. The height is 120 which extends 120 to the bottom.

Perform some work with a string using various string operations.

string str1, str2;

str1.toUpperCase();

str2.toLowerCase();

str1.concat(str2);

str1.subString(0, 2);

str2.charAt(3);

str1.length();

str1.toString();

str1.replace(‘g’, ‘I’);

str1.equals(str2);

str1.equalsIgnoreCase(str2);

Complete the code for a partial class such as getters, setters, and toString().

public class Student {

private String name;

private String id;

public void setName(String name) {

this.name = name;

}

public void setID(String id) {

this.id = id;

}

public String getName() {

return this.name;

}

public String getID() {

return this.id;

}

public String toString() {

return “Student name: “ + this.name + “\nStudent ID: “ + this.id;

}

}

Given an amount like 67 cents, compute number of quarters, dimes, nickels, and pennies.

cents = 67;

quarters = cents / 25;

cents %= 25;

dimes = cents / 10;

cents %= 10;

nickels = cents / 5;

cents %= 5;

pennies = cents;

NumberFormat currency = NumberFormat.getCurrencyInstance();

NumberFormat percent = NumberFormat.getPercentInstance();

DecimalFormat decimal = new DecimalFormat(“#.###”);