Write the output and explain why:

|  |  |  |
| --- | --- | --- |
|  | Code | Output |
| A | public static void foo(int num) {  System.out.print(num\*3);  }  public static void foo(double num) {  System.out.print(num\*2);  }  public static void bar() {  foo(2.0);  foo(3);  } | |  |  | | --- | --- | | Method Call | Output | | bar() | 4.09 | | foo(5) | 15 |   Because: Since foo(2.0) is a double, you input it into the foo(double num) and that prints 4.0 because 2.0\*2 =4.0.  Since foo(3) is an int, you input it into the foo(int num) and that prints 9 because 3\*3=9. There is no indicated space between the numbers so the total output is 4.09.  When foo(5), you plug 5 into num and 5\*3=15 so the output is 15. |
| B | for (int i = 1; i <=5; i++) {  for (int j = i; j > 0; j--) {  System.out.print(j + " ");  }  System.out.println();  } | 1  1 2  1 2 3  1 2 3 4  1 2 3 4 5  Because: int i is the number of rows that print with adding numbers starting at 1 and increment for each row. So there are 5 rows. |

Are these expressions or statements Valid? Explain why:

|  |  |
| --- | --- |
| int num = “three”; | Invalid because “three” is a string literal and not an integer. |
| String first2Last= “Hernandez”; | Valid because “Hernandez” is a String. |
| double 2num = 4.7; | Invalid because a variable name cannot start with a number. |

1. Write a block of code that prints out an n by n zero matrix:

**import** java.util.Scanner;

**public** **class** Matrix {

**public** **static** **void** main(String[] args) {

Scanner scnr = **new** Scanner(System.***in***);

**int** n;

System.***out***.println("Enter n number of rows");

n = scnr.nextInt();

**for** (**int** i = 1; i <= n; ++i) {

System.***out***.println("");

**for** (**int** j = 1; j <= n; ++j) {

System.***out***.print("0");

}

}

}

}

1. Write a static void method that takes two int numbers and display the sum:

**import** java.util.Scanner;

**public** **class** Sum {

**static** Scanner *scnr* = **new** Scanner(System.***in***);

**static** **int** *numOne*;

**static** **int** *numTwo*;

**static** **int** *numSum*;

**public** **static** **int** Sum(**int** numOne, **int** numTwo) {

System.***out***.println("Enter two integers: ");

numOne = *scnr*.nextInt();

numTwo = *scnr*.nextInt();

**public** **static** **void** main(String[] args) {

*Sum*(*numOne*, *numTwo*);

System.***out***.println("The sum is: " + *numSum*);

}

}

1. Write a class called Bird that contains two static void method called sing() that display the sound of the bird, and another static method called eat() that will call the method sing() and display “num num Yummy food!” invoke both methods from the main method

**import** java.util.Scanner;

**public** **class** Bird {

**static** Scanner *scnr* = **new** Scanner(System.***in***);

**public** **static** String Sing() {

String birdSound;

System.***out***.println("Enter the sound of a bird: ");

birdSound = *scnr*.nextLine();

System.***out***.println(birdSound);

**return** birdSound;

}

**public** **static** **void** Eat() {

*Sing*();

System.***out***.print("num num Yummy food!");

}

**public** **static** **void** main(String[] args) {

*Eat*();

}

}