Name: _____

Question 1: Show the output from the following code segments:

	Code	Output
A (4)	```java for (int i = 3; i <= 24; i+=3) { if (i % 2 == 0) { System.out.println("trick " + i); } else { System.out.println("treat " + i); } } ```	
B (4)	```java for (int i = 1; i < 5; i++) { System.out.print("i = " + i + ": "); for (int j = i; j > 0; j--) { System.out.print((j + i) + " "); } System.out.println(); } ```	

| C

 (5) | ```java public static void pick(int num) {   switch (num) {   case 1:   System.out.println("Mets");   break;   case 2:   System.out.println("Yankees");   case 3:   System.out.println("Red Sox");   break;   case 4:   System.out.println("White Sox");   default: System.out.println("Dodgers");   break;   } } ``` |

method call	result
pick(1)	
pick(2)	
pick(3)	
pick(4)	
pick(5)	

Question 1: Show the output from the following code segments:

D

(8)

```java
public class V1 {
    public static void main(String[] args) {
        foo(true);
        System.out.print("All done!");
    }

    public static void foo(boolean a) {
        boolean b = false;
        bar(a, b);
        boolean d = true;
        soo(d, "d");
    }

    public static void bar(boolean a, boolean b) {
        if (a && b) {
        System.out.println("water");
        } else if (a) {
        System.out.println("fire");
        } else if (b) {
        System.out.println("wind");
        } else {
        System.out.println("snow");
        }
        boolean c = !a;
        soo(c, "c");
    }

    public static void soo(boolean e, String varName) {
        if (e) {
        System.out.println(variableName + " is " + e);
        } else {
        System.out.println(variableName + " is " + e);
        }
    }
}
```

Question 2: Valid or Invalid Syntax?

A
 	
(1)
	`int numBooks = 3;`
	`int numNotebooks = 2;`
	`numBooks += numNotebooks;`
		Valid **Invalid**

B **(1)**	`System.out.print("Dog count = ", numDogs);`	**Valid** **Invalid**
B **(1)**	`int __numCars = 5;`	**Valid** **Invalid**

D
 	
(1)
	`String s1 = "Hello";`
	`String s2 = "Goodbye";`
	`s1 = s1 + " " + s2;`
		Valid **Invalid**

E
 	
(1)
	`if (5 < a < 9) {`
	`     a = a * 5;`
	`} else {`
	`     a = a * 6;`
	`}`
		Valid **Invalid**

Question 3 (24): During text messaging, people use abbreviations to save on typing. Write the code to ask the user for an SMS Abbreviation and perform the translation for the following 3 abbreviations:

- `LOL means Laughing Out Loud`
- `TMI means Too Much Information`
- `SMH means Shaking My Head`

If the abbreviation is not included in the list, your program should output "Unknown Abbreviation" for the translation. **The input should be case insensitive** and the output should be as shown above.

Example Run:

```
Please enter an abbreviation:
LOL
LOL means Laughing Out Loud
```

Question 4 (28): Write a **public static void** method named **life** that takes in an **int age and prints** a phrase based on the rules below:

age is greater than 0 but Less than 18:	print "Chillin"
age is 18 or greater but less than 30:	print "Smooth Sailing"
age is 30 or older but less than 70:	print "Working Hard"
age is 70 or over:	print "Silver and Gold"
age is 0 or less:	print "Get Real"

Question 5 (15): Write a block of code that will print out all numbers *N* that are evenly divisible by 3 in the range from 1 to 99, inclusive. When a number *N* is found, your code should output:

 "*N* is divisible by 3"

Question 6 (27): Write a complete class named **Magic** with **2 static void methods** and a **static void main method** as shown below:

   i.   A method named **magicMethod** with zero arguments that will print "I am the magic method!!!"
   ii. A method named **workerMethod** with 2 **int** arguments **a** and **b.** Use **a** to determine how many times to call the **magicMethod.** After all invocations of **magicMethod** are complete, print the product of **a * b.**
   iii. Show the method invocation of **workerMethod** from the **main** method.