1:
A:
```
if (grade >= 90) { System.out.println(“Great Job!”); }
```

B:
```
if (number < 20 || number > 50) { System.out.println(“Error”); }
```

C:
```
if (y < 100) { y += 2; }
```

2:
```
if (num1 > num2) {
        System.out.println(“ First number is larger.”);
} else if (num2 > num1) {
        System.out.println(“ Second number is larger.”);
} else {
        System.out.println(“ Numbers are equal.”);
}
```

3:
A:
Blank 1 is even blank 2 is odd
B:
```
int num = 4;
switch (num % 2) {
        case 0:
                System.out.println("Even");
                break;
        case 1:
                System.out.println("Odd");
                break;
}
```

4:
A:
```
Int In = random.nextInt(50) + 1;
```

B:
```
int In = random.nextInt(80) + 20;
```

C:
```
double Do = random.nextDouble(10) + 10;
```

5:

```
if (age < 18) {
	System.out.println("child");
} else if (age => 18 && age < 65) {
	System.out.println("adult");
} else if (age => 65) {
	System.out.println("senior");
}
```

6:
A:
True

B:
False

C:
True

D:
True

E:
True

F:
True

G:
True

8:
A:
True

B:
False, Rounding errors appear in a floating point format due to the imperfect representation unlike the int attribute

C:
False, nested if statements happen when you place an if statement in another if statement. A if else if statement is a chain of commands starting with if then followed by more else if statements

D:

False, switch statements allow you to check a value against other exact values for example if num is 1 do this; if num is 2 do that. Double can have tiny errors because they are stored in binary floating point.

E:
True

F:
False, seed values are the same set of numbers so that every time you start it will give the same set of numbers. Without it, you will get completely random numbers.

G:
True

H:
True

I:
False, ! binds tighter than && like order of operations in math

J:
True

K:
True

L:
True