

1. a)

```
if (grade >= 90)
{
    System.out.print ("Great job!");
}
b) if ( number < 20 || number > 50)
{
    System.out.print ("Error");
}
c) if ( y<100)
{
    y = 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.print("Numbers are equal");
}
```
3. a) If = even
Else = odd

b)

```
switch (num % 2) {
case 0:
    System.out.print("Even Number");
    break;
default:
    System.out.print("Odd Number");
    break;
}
```
4. a) `int num = rand.nextInt(50) + 1 ;`
b) `int num = rand.nextInt(81) + 20 ;`
c) `int num = rand.nextInt(11) + 10 ;`
5. Doesn't take into account the ages 18 and 65

6. a) True
b) False
c) True
d) True
e) True
f) True
g) True

8. a) True
b) False - Integers don't have decimals
c) False - A nested statement has another statement within the existing if statement.
d) False - It must evaluate to an int
e) True
f) False - The same sequence of numbers will run
g) True
h) True
i) False - ! is evaluated first
j) True
k) True
l) True