CSCE 747 - Mutation Testing Activity
Name(s):

The following code iterates over an array and makes all negative values positive.

```
1. public int[] makePositive(int[] a){
2.     int threshold = 0;
3.     for(int i=0; i < a.length; i++){
4.         if(a[i] < threshold){
5.             a[i]= -a[i];
6.         }
7.     }
8.     return a;
9. }
```

1: How many mutations are possible for the following operators:
- **Relational Operator Replacement**
- **Arithmetic Operator Replacement**

2: Apply the relational operator replacement operation to statement 4 of the method, and design a test case that would kill that mutant.

3: Design an equivalent mutant that no test case can detect. You may apply up to three mutation operators.

4: Design a valid, but useless mutant. You may apply up to three mutation operators.