# DIT635 - Mutation Testing Activity

**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 use any mutation operator discussed in class.**

**4: Design a valid (compiles), but useless (almost always fails) mutant. You may use any mutation operator discussed in class.**