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Part 1:

```
C:\Users\soni2\github_repos\COMP371_A1>g++ part1.cpp && .\a.exe
8
size:8
01234567
```

Part 2:

```
C:\Users\soni2\github_repos\COMP371_A1>g++ part2.cpp && .\a.exe

 ***Point***
displaying point...
x: 3 y: 2 z: 3
displaying point...
x: 3 y: 5 z: 3
translating point by 5 in x axis...
displaying point...
x: 8 y: 5 z: 3
return result of translation : 0

 ***Triangle***
press 1 to display triangle coordinates on the screen. else press a
ny other key
1
displaying points...
x1: 8 y1: 5 z1: 3
x2: 1 y2: 2 z2: 3
x3: 9 y3: 8 z3: 7
translating triangle coordinates by 1 in the x axis...
translating point by 1 in x axis...
displaying point...
x: 9 y: 5 z: 3
translating point by 1 in x axis...
displaying point...
x: 2 y: 2 z: 3
translating point by 1 in x axis...
displaying point...
x: 10 y: 8 z: 7
displaying points...
x1: 9 y1: 5 z1: 3
x2: 2 y2: 2 z2: 3
x3: 10 y3: 8 z3: 7
calculating area...
x1: 9
y2-y3: -6
x2: 2
y3-y1: 3
x3: 10
y1-y2: 3
area: 0.5 * abs(x1*(y2-y3)+x2*(y3-y1)+x3*(y1-y2))
area: 0.5 * abs(9 * -6 + 2 * 3 + 10 * 3)
area: 0.5 * abs(-18)
the area of the triangle is: 9
Triangle destructor executed
Point destructor executed
Point destructor executed
Point destructor executed
```

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If using default constructor for triangle...

```
C:\Users\soni2\github_repos\COMP371_A1>g++ part2.cpp && .\a.exe

 ***Point***
displaying point...
x: 3 y: 2 z: 3
displaying point...
x: 3 y: 5 z: 3
translating point by 5 in x axis...
displaying point...
x: 8 y: 5 z: 3
return result of translation : 0

 ***Triangle***
press 1 to display triangle coordinates on the screen. else press any other key
1
displaying points...
one or more vertex has null point values
translating triangle coordinates by 1 in the x axis...
cannot translate! one or more vertex has null point values
displaying points...
one or more vertex has null point values
calculating area...
one or more vertices are null, cannot calculate area
Triangle destructor executed
Point destructor executed
Point destructor executed
Point destructor executed
```