12. (a) (i) *Award **[1 max]**.*

A = 3 and B = 3; **[1]**

(ii) *Award **[1]** for identifying a reason why the algorithm may not work and **[1]** for suggesting a solution up to **[2 max]**.*

The algorithm does not correctly swap the values because the value of B is overwritten/lost in the second line of the algorithm;
To obtain the correct result the line `B = TEMP` should be swapped with the line `A = B` / the order of statements should be changed as follows:

```
TEMP = A
A = B
B = TEMP
```
[2]

(b) *Award **[4 max]**.*

*Award **[1]** for the loop changing column indexes.*
*Award **[1]** for the use of temporary variable.*
*Award **[1]** for the correct order of statements within the loop.*
*Award **[1]** for correct reference to elements of `MAT`.*

Example 1:

```
swapRows(MAT, K, L)
  loop for C from 0 to 3
    T = MAT[K][C]
    MAT[K][C] = MAT[L][C]
    MAT[L][C] = T
  end loop
end swapRows
```

Example 2:
*Award **[1]** for the loop changing column indexes.*
*Award **[1]** for the using/calling method `swap()`.*
*Award **[1]**, **[1]** for each correct parameter in swap method call.*

```
swapRows(MAT, R1, R2)
  loop for C from 0 to 3
    swap (MAT[R1][C], MAT[R2][C])
  end loop
end swapRows
```
[4]

(c) (i) *Award **[1 max]**.*

105; **[1]**

(ii) *Award **[1 max]**.*

```
ROUNDS[2][3];
```
[1]