1) (5 pts) ALG (Dynamic Memory Management in C)

Given the following C code.

```
int **arr1 = malloc(3 * sizeof(int *));
for(int i = 0; i < 3; ++i)
     arr1[i] = malloc(2 * sizeof(int));
int *arr2 = malloc(3 * 2 * sizeof(int));
```

Answer the following questions about the above lines of code.

a) Does `arr1` and `arr2` require the same number of total bytes allocated to be stored in the heap space? Please write yes or no. No reason is needed.

b) Are **all** the addresses associated with `arr1` (excluding `arr1` itself on the stack space) adjacent in memory? Please write yes or no only. No reason is needed.

c) Are **all** the addresses associated with `arr2` (excluding `arr2` itself on the stack space) adjacent in memory? Please write yes or no only. No reason is needed.

d) Complete the following stack and heap space visual below showing how the memory state looks for both `arr1` and `arr2` from the above lines of code (after all lines execute properly). For each box you draw in the heap space, indicate what type of variable is stored in the box.