

Answer /complete the following

- What is the size of ptr?
 - What is the size of twod?
 - What is the size of twod[0] and why?
 - What is the size of twod[0][0]?
 - What can you say about twod and twod[0] as it relates to the name of the array?
 - Draw a memory map that shows the memory locations of each element of the array and of ptr.
- 2) Using the provided address from #1 as the base address of the 2D array and the location of ptr, based on the code below, create an educated guess that clearly outlines what you believe will happen as each line is executed. In your explanation clearly explain what is happening, don't just give memory addresses or values. If you only provide memory addresses or values you will receive 0 points for this problem. Your guesses will be clearly labeled in the PDF file. You must provide the line of code and then the explanation. You must also provide per each line of code what the type is. Within each printf statements is a ?. You must specify if the ? would be a **d** for an int or a **p** for a pointer.

```
printf("twod + 3 is: %?\n", twod + 3); Add 3 ints to address twod - int* - 37b4
printf("(*(twod + 1)) is: %?\n", (*(twod + 1))); Add 1 int to add twod - int - 10
printf("*twod + 1 is: %?\n", *twod + 1); Add 1 int to the * at [0] - int* - 3794
printf("*twod[2] is: %?\n", *twod[2]); Value at row 2 - int - 20
printf("(*(twod + 2) + 2 is: %?\n", (*(twod + 2) + 2)); Add 2 ints to rows, then 2 ints to cols - int* - 37b8
printf("twod[1] is: %?\n", twod[1]); Address of row 1 array start - int* - 379c
printf("twod[1][2] is: %?\n", twod[1][2]); Value at row 1, col 2 - int - 12
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```
printf("ptr %?\n", ptr); int* - 9ed8 - ptr address
printf("twod [1] %?\n", twod [1]); Address of row 1 array start - int* - 379c
printf("ptr[1] %?\n", ptr[1]); move ptr through row 0 to col 1 - move 1 int - int - 1
printf("ptr + 1 %?\n", ptr + 1); add 1 int to ptr - int* - 3794
printf("(ptr + 1) %?\n", *(ptr + 1)); add 1 int to ptr, then get value - int - 1
printf("twod + 1 %?\n", twod + 1); add 1 int to twod - address of twod[1] - int* - 379c
printf("*twod + 1 %?\n", *twod + 1); Add 1 int to the * at twod[0] - int* - 3794
printf("ptr[8] %?\n", ptr[8]); Add 8 ints to the address of ptr, get value - int - 22
```