

1. (15 points) Suppose we have this c program:

```
#include <stdio.h>

int g = 42;

void func(int c, float d, int* e)
{
    int f = (int)(d + c);
    *e = f + g;
    // your memory map should be created at
    // this point (before the return)
}

int main(int argc, char**argv)
{
    int a = 10;
    const char* s = "Hello, World!";
    int *aptr = &a;
    float b = 9.6f;

    func(a, b, aptr);
}
```

Fill in the following table with the physical addresses where each of these variables exists and the value being stored in that location when the program is run on your computer and reaches the point indicated by the comment. You could use a debugger (we haven't looked at these yet), or you can use some strategically placed printf statements. Describe how you came up with these addresses (if you changed the code [make sure it doesn't affect the addresses!] attach that). Finally, describe which of the 4 process-memory sections each variable lies within (see slide 8).

Variable	Address	Value	Memory Location
a			
b			
c			
d			
e			
f			
g			
s			

2. (3 points) Describe in more detail the relationship between variable e and a when we reach the point of interest.
3. (2 points) Describe in your own words what a pointer is (your answer might change as we continue to explore C, but I want to see your early impressions).