

Practice Problem 1:

```
int main() {  
    int a = 10;  
    int b = 20;  
    int c = 30;  
  
    int* p1 = &a;  
    int* p2 = &b;  
    int* p3 = &c;  
  
    printf("%i %i %i\n", *p1, *p2, *p3);  
  
    *p3 = 66;  
  
    p3 = p2;  
    p2 = p1;  
  
    *p1 = *p1 + 100;  
    *p2 = *p2 + 400;  
    *p3 = *p3 + 800;  
  
    printf("%i %i %i\n", *p1, *p2, *p3);  
    printf("%i %i %i\n", a, b, c);  
  
    return EXIT_SUCCESS;  
}
```

Draw a box-and-pointer diagram to indicate what the following snippets of code are doing. Also show what is output.

Output:

Box and pointer diagram (you can just cross out things to show how they change as the code executes):