

[15 marks] Describe the complete execution sequence (line-by-line) for the following program. Record your answer in Blackboard according to the instructions described there.

```
01 #include <stdio.h>
02
03 #define STR_SIZE 20
04 #define TMOUNTS 2
05
06 struct Unit
07 {
08     char identifier[STR_SIZE + 1];
09     double x;
10     double y;
11     double weightFactor;
12 };
13 struct TVMount
14 {
15     char description[STR_SIZE + 1];
16     struct Unit limits;
17     struct Unit tv;
18 };
19 double calcWeight(const struct Unit* itm)
20 {
21     double weight = itm->x * itm->y * itm->weightFactor;
22     printf("%-15s:%6.2lf\n", itm->identifier, weight);
23
24     return weight;
25 }
26
27 int main(void)
28 {
29     int i;
30     double weight, totalWeightFree = 0;
31     struct TVMount room[TMOUNTS] = {
32         { "Living Room", { "Cheetah Mount", 1.5, 1, 80},
33         { "50-Inch TV", 3, 2, 2.5} } };
34     for (i = 0; i < TMOUNTS; i++)
35     {
36         if (room[i].description[0] != '\0')
37         {
38             printf("Room: %s\n", room[i].description);
39             weight = calcWeight(&room[i].limits) - calcWeight(&room[i].tv);
40             printf("Unused Weight: %6.2lf\n", weight);
41             totalWeightFree += weight;
42         }
43     }
44
45     printf("Total Unused Weight: %6.2lf\n", totalWeightFree);
46
47     return 0;
48 }
```