1. (5 points)
Given the following table (where ‘–’ indicates no value):

<table>
<thead>
<tr>
<th>Type</th>
<th>Name</th>
<th>Memory Location</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>int</td>
<td>x</td>
<td>0x234</td>
<td>10</td>
</tr>
<tr>
<td>int*</td>
<td>y</td>
<td>0x238</td>
<td>0x242</td>
</tr>
<tr>
<td>int</td>
<td>z</td>
<td>0x242</td>
<td>45</td>
</tr>
<tr>
<td>int*</td>
<td>b</td>
<td>0x250</td>
<td>–</td>
</tr>
</tbody>
</table>

What will the following lines of code output?

(a) b = y;
    y = &z;
    *b = 15;
    printf("%d %d\n", *y, *b);

(b) b = &x;
    *b = 15;
    *y = 13;
    printf("%d %d\n", x, z);
    y = b;
    *b = 15;
    *y = 13;
    printf("%d %d\n", x, z);
2. (15 points)  
For the following code segment, write a function prototype, function definition, and function call that will cause the two \texttt{printf} statements marked with a ‘*’ to display $x_1$ then $x_2$ and $x_2$ then $x_1$, respectively.

```c
#include <stdio.h>

int main() {
    int x1, x2;

    printf("Enter two numbers to be swapped > ");
    scanf("%d%d", &x1, &x2);
    * printf("x1: %5dx2: %5d\n", x1, x2);
    -2->
    * printf("x1: %5dx2: %5d\n", x1, x2);
    return 0;
}
-3->
```

Answer Box: