Task 3. The below C program outputs 3 lines, what are these output lines? Give a brief explanation of what happens at each function call.

```c
#include <stdio.h>

int A(int y) {
    y = y + 1;
    return y;
}

void B(int *y) {
    y = (int*) 10;
}

void C(int *y) {
    *y = 6;
}

int main(int argc, char *argv[]) {
    int x = 4;

    x = A(x);
    printf("%d\n", x);

    A(x);
    B(&x);
    printf("%d\n", x);

    C(&x);
    printf("%d\n", x);

    return 0;
}
```

5
5
6

Explanation:
Line 17: x is defined as an integer with the value of 4
Line 19: the value which returned form Function A is given to x.
And what happens when Function A is called here?
1. The value of x is given to y in function A, so y is 4.
2. The value of y+1 is given to y, so y is 5.
3. Return the value of y, which means return 5.
So, the value of 5 is given to x in line 19. So, x is 5.
Line 20: Show the value of x. So here: 5

Line 22: Function A is called again, this time x is 5, and the value 5 is given to y in function A. Then the value of y+1 is given to y, so y is 6. At last return the value of 6. But nothing received this value here. So, after Line 22, x is still 5.

Line 23: Function B is called. What happens here?
1. The address of int x is given to pointer y in function B.
2. And then the address of an int 10 is given to pointer y.
So, after Line 23, nothing about x is changed. x is still 5.
Line 24: Show the value of x, which is still 5.

Line 26: Function C is called. What happens this time?

1. The address of int x is given to pointer y in function C.
2. 6 is given to the integer, which in the address of y. Which is also the address of x. So, the value of x is changed here to 6.

Line 27: Show the value of x, which is now 6.