```cpp
1    #include <iostream>
2
3    #define SHOW(arg) std::cout << "Macro SHOW "" #arg "": " << (arg) << '\n';
4
5    // Pass-by-reference.
6    void ref_swap(double &x, double &y) {
7      double tmp{x};
8      // Assign caller variables.
9      x = y;
10     y = tmp;
11   }
12
13   // Pass-by-reference using pointers.
14   void ptr_swap(double *x_ptr, double *y_ptr) {
15     double tmp{*x_ptr};
16     // Assign caller variables.
17     *x_ptr = *y_ptr;
18     *y_ptr = tmp;
19   }
```

TP 2 - Problem 4 - II

```
20
21   int main() {
22     double x{1};
23     double y{2};
24     ref_swap(x, y);
25     SHOW(x)
26     SHOW(y)
27     // The operator & must be used explicitly to get the address of x or y:
28     // "&x" is an instance of "double *".
29     ptr_swap(&x, &y);
30     SHOW(x)
31     SHOW(y)
32     return 0;
33   }
```

TP 2 - Problem 4 - III

Output:

```
1   Macro SHOW "x": 2
2   Macro SHOW "y": 1
3   Macro SHOW "x": 1
4   Macro SHOW "y": 2
```