BASIC, FORTRAN, & ALGOL W
Simulations (BASIC)

```
10 I = 1 : J = 2 : K = 3
20 D := FNW(I, J-2)
30 PRINT I

100 DEF FNW(L, M)
110 L = 10 : J = 6
120 PRINT M : FNW = 0
140 FNEND                                   output -> 0
999 END                                                1
```

```
#include <iostream> //                      executable C++
using namespace std;
int I, J, K; float D;

float W(int L, int M)
{
    L = 10;  J = 6;
    cout << M << endl;
    return 0;
}

int main()
{
    I = 1;  J = 2;  K = 3;
    D = W(I, J-2);
    cout << I << endl;
    return 0;
}
```

FORTRAN

```
      I = 1                          FUNCTION W(L, M)
      J = 2                          L = 10
      K = 3                          J = 6
      D = W(I, J-2)                  WRITE(4, 15) M
   15 WRITE(4, 15) I                 W = 0
      FORMAT(1X, I7)                 END
      END                                        output -> 0
                                                          10
```

```
#include <iostream> //                executable C++
using namespace std;

float W(int &L, int &M)
{
    int J = 6; L = 10;
    cout << M << endl;
    return 0;
}

int main()
{
    int temp, I, J, K; float D;

    I = 1;  J = 2;  K = 3;
    temp = J-2;
    D = W(I, temp);   //      (use J-2 in FORTRAN)
    cout << I << endl;
    return 0;
}
```

ALGOL W

```
INTEGER I,J,K; REAL D;

I := 1; J := 2; K := 3;
D := W(I, J-2);
WRITE I;

REAL PROCEDURE W(INTEGER L, M)
BEGIN      L := 10;      J := 6;
WRITE M;
0                                        output -> 4
END;                                                10
```

```
#include <iostream> //                  executable C++
using namespace std;

int I, J, K; float D;

float W(int &L, int M)
{
    J = 6; L = 10; // J is global
    cout <<   // M << endl;
                  J-2 << endl;   (M names J-2 in main)
    return 0;
}

int main()
{
    I = 1;  J = 2;  K = 3;
    D = W(I, J-2);
    cout << I << endl;
    return 0;
}
```