Assignment 1

1) Passing the parameters by reference leads to the value of 2 being assigned to M. Passing by value-return results in M = 3.

2) In both value-return cases, the parameters (i, A[i]) are passed into the subroutine, where i = 1, and A[i] =A[1] = 10. Both variants will print the second parameters value (10) immediately.

In the instance of a single address calculation, K, which references i, is set to 2 and X, which references A[1], is set to 20. When the subroutine completes it returns both of these values to the referenced variables and prints A[1], which is now 20, and A[2], which remains 11.

With the case of two address calculations, K is set to 2, and X is set to 20. The addresses are re-calculated on subroutine completion before the values of K and X are assigned. So K, which referenced i, is set to 2, but this changes the next parameter A[i]. Now that i is set to 2, A[i] becomes A[2] and the value of X(which is 20) is returned to this new location. When the print calls for A[1] and A[2], the values 10 and 20 will be displayed.