## Function Summary Report Function: f3

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| **Before Optimization** | **After Optimization** |
| C code :  **void** f3(**int** \*a, **int** \*b,**int** rows,**int** cols){  **int** i,j;  **for** (i=**0**;i<rows;i++){  **for** (j = **0**; j < cols;j++)  a[i\*cols +j] = b[i];  }  } | C Code :  **void** f3(**int** \*a, **int** \*b,**int** rows,**int** cols){  **int** i,j,temp,val;  **for** (i=**0**;i<rows;i++){  temp = i\*cols;  val = b[i];  **for** (j = **0**; j < cols;j++)  a[temp +j] = val;  }  } |
| Calculated # instruction executions:  3,019,000,000 | Calculated # instruction executions:  4,210,000,000 |
| rpistat results:  Cycles: 5,136,119,774  Instructions: 784,501,282 [3,096,715,586]  CPI: 1.659 | rpistat results:  Cycles: 8,349,977,111  Instructions: 1,064,638,927 [4,155,526,134]  CPI: 2.009 |
| % Performance improvement by optimization:  1 – (Cycles after optimization/Cycles before optimization) X 100% = 38.5% | |

## Focus of improvement: (check all that apply)

* code motion/precomputation
* sharing of common subexpressions
* strength reduction
* removing unnecessary procedure calls
* reduce memory references
* loop unrolling
* other (explain):\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_