LA Worksheet #7

1. Loop unrolling is a coding technique that allows for more operations to be done within each iteration of a loop, allowing the program to check conditions less and allow parallelism. It can make code less readable and more memory-dependent.

2. Instructions involving %rsp (pop, push, etc.) affect the stack.

3. Reorder the for loops i,j,k for spatial locality, pull constant operations out of the inner for loop, pull 4*M out of the loops.

4. temp, temp, (0xFF & *ptr1), temp << 8, temp, temp = (0xFF & *ptr1), sum += temp << 16, *ptr2 = temp, ptr1++, ptr2++, temp = (0xFF & *ptr1), sum += temp << 24, *ptr2 = temp, ptr1++, ptr2++.