

```
#include<stdio.h>

int main(){
    int Y, A, B, C, N;
    scanf("%d%d%d%d", &Y, &A, &B, &C, &N);
    int L1 = 1, L2 = 1, L3 = 1;

    // Do rules 1, 2, 3 apply to Y?
    // If rule 1 does not apply, then L1 will remain 1
    // as we set L1 = 1 above, similarly for rules 2 and 3
    if(Y % A == 0) L1 = -1;
    if((Y % A == 0) && (Y % B == 0)) L2 = -1;
    if((Y % A == 0) && (Y % B == 0) && (Y % C == 0)) L3 = -1;

    // First check Y according to all three rules
    if(L1 * L2 * L3 < 0) printf("Leap\n");
    else printf("Common\n");

    int L = 1;
    // Then check Y according to only rules 1 ... N
    switch(N){
        default: printf("Invalid value of N"); break;
        case 3: L *= L3;
        case 2: L *= L2;
        case 1: L *= L1;
    }
    if(L < 0) printf("Leap");
    else printf("Common");

    return 0;
}
```