

```

1  /***** Multiplicative Inverse *****/
2  #include <iostream>
3  using namespace std;
4
5  long long int mul_inv(int a, int b)
6  {
7      long long int b0 = b, t, q;
8      long long int x0 = 0, x1 = 1;
9      if (b == 1) return 1;
10     while (a > 1) {
11         q = a / b;
12         t = b, b = a % b, a = t;
13         t = x0, x0 = x1 - q * x0, x1 = t;
14     }
15     if (x1 < 0) x1 += b0;
16     return x1;
17 }
18
19 int main(void) {
20     cout<<mul_inv(42, 2017)<<endl;
21     return 0;
22 }

```