① Slow code:

```
...
int A2=A;
for(int i=0;i<1e7;++i){
  B2[A2%B]=true;
  A2+=A;
}
...
```

② Optimized code 1 in iteration 2:

```
...
int A2 = A % B;
for (int i=0;i<B;++i){
  B2[A2] = true;
  A2 = (A2 + A) % B;
}
...
```

③ Optimized code 2 in iteration 2:

```
...
int A2 = A % B;
for(int i=0;i<1e7;++i){
  B2[A2%B] = true;
  if (A2%B==C) {
    ...
    return 0;
  }
  A2+=A;
}
...
```

④ Optimized code 3 in iteration 3:

```
...
int A2 = A % B;
for(int i=0;i<B;++i){
  B2[A2] = true;
  if (A2 == C) {
    ...
    return 0;
  }
  A2 = (A2 + A) % B;
}
...
```