

```
1 namespace AdventOfCode2023;
2
3 class Program
4 {
5     public static void Main()
6     {
7         Console.WriteLine("Day 04b");
8
9         string[] input = File.ReadAllLines("input.txt");
10
11         var scratchCards = input
12             .Select(sc => sc.Split(':', '|'))
13             .Select(sc => new {
14                 Winning = Array.ConvertAll(sc[1].Trim().Split(' ',
15                     StringSplitOptions.RemoveEmptyEntries), s => int.Parse
16                     (s)),
17                 Chosen = Array.ConvertAll(sc[2].Trim().Split(' ',
18                     StringSplitOptions.RemoveEmptyEntries), s => int.Parse
19                     (s))
20             })
21             .Select(sc => new {
22                 Matches = sc.Chosen.Intersect(sc.Winning).Count(),
23                 Occurrences = 1
24             })
25             .ToArray();
26
27         for(int position = 0; position < scratchCards.Length; position+
28             +)
29         {
30             for (int offset = 1; offset < scratchCards[position].Matches
31                 + 1; offset++)
32             {
33                 if (position + offset < scratchCards.Length)
34                 {
35                     scratchCards[position + offset] = new {
36                         scratchCards[position + offset].Matches,
37                         Occurrences = scratchCards[position].Occurrences
38                         + scratchCards[position + offset].Occurrences
39                     };
40                 }
41             }
42         }
43
44         Console.WriteLine(scratchCards
45             .Sum(sc => sc.Occurrences));
46
47         Console.WriteLine("Complete");
48     }
49 }
```