2205 - Counting Ones

Description

Consider the binary representation of the integers in the range [A, B] (1 <= A <= B <= 1000). How many 1's are needed to write all those binary numbers? Easy, isn't it?

Input specification

An integer T with the total number of test cases will be in the first line. T lines follow, each one with a 2 integers A, B, denoting the first and last integer in the range.

Output specification

Output a line per test case. Each line must contain an integer with the number of 1's needed to write the binary representation of all integers within the current interval.

Sample input

```
2
1 10
15 100
```

Sample output

```
17
291
```

Hint(s)

Source	Ray Williams Robinson Valiente
Added by	**xshaka**
Addition date	2012-12-10
Time limit (ms)	3000
Test limit (ms)	1000
Memory limit (kb)	262144
Output limit (mb)	64