

Southeastern European Regional Programming Contest Bucharest, Romania October 18, 2008

## Problem G Lucky numbers

Input File: G.IN Output File: standard output Program Source File: G.C, G.CPP, G.JAVA

John has recently arrived in Bucharest for the South Eastern European Regional Contest. John is famous for his theory of lucky numbers. That's why all the contestants and spectators are very happy.

According to that theory **4** and **7** are lucky digits, and all the other digits are not lucky. A lucky number is a number that contains only lucky digits in decimal notation. A very lucky number is a number that can be expressed as a product of several lucky numbers. A lucky number by itself is considered to be very lucky. For example, numbers **47**, **49**, **112** are very lucky.

Your task is to calculate the number of very lucky numbers that are not less than  ${\bf A}$  and not greater than  ${\bf B}.$  Of course, numbers  ${\bf A}$  and  ${\bf B}$  are given by John.

Input:

The first line of the input contains a single integer  ${\tt T}$  - a number of test cases. Each of the next  ${\tt T}$  lines contains two integers separated by a single space -  ${\tt A}$  and  ${\tt B}.$ 

**Output:** Output must contain **T** lines - answers for the test cases.

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Constrains:

1 \le T \le 7777,

1 \le A \le B \le 100000000000 (10^{12}).
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Input	Output
4	0
1 2	0
88 99	1
112 112	10
1 100	

Hint:

Very lucky numbers for the last case of the sample input are: 4, 7, 16, 28, 44, 47, 49, 64, 74 and 77.