Power pairs X43191_en

Two integers greater than zero that are powers of the same number form a *power pair*. For example 6 and 1 form a power pair because $6 = 6^1$ and $1 = 6^0$. Numbers 4 and 8 are also a power pair because $4 = 2^2$ and $8 = 2^3$.
Write a code to count the powers pairs formed by contiguous values in a sequence of numbers. To be valid, you MUST implement and use the following function:

```
// Pre: n >= 0, base > 1
// Post: returns true when n is a power of base.
//       returns false otherwise
bool is_power(int n, int base)
```

Exam score: 3.00 **Automatic part:** 40.00%

Input

The input is a series of zero or more cases. Each case is made up of a nonempty sequence of integers greater than zero and ends with the zero mark that is not part of the sequence.

Output

For each case, a line with the number of power pairs formed by numbers that appear in consecutive positions of the sequence.

Sample input

```
3 6 8 4  12  9  1  6 0
1 2 1 0
22 11 121 25 125  27 9 0
12 144 3 0
1 0
```

Sample output

```
3
2
3
1
0
```

Observation

Good code structure will be valuated.

Problem information

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