**14. Funny Numbers**

**Condition:**

Mubashir was playing with some numbers and found some funny numbers. Funny numbers are defined as follows:

* 89 --> 8¹ + 9² = 89 \* 1
* 695 --> 6² + 9³ + 5⁴ = 1390 = 695 \* 2
* 46288 --> 4³ + 6⁴ + 2⁵ + 8⁶ + 8⁷ = 2360688 = 46288 \* 51

Create a program that accepts a number **`** **n `** and a positive integer **`** **p `** and returns a positive integer **`** **k `** , such that the sum of the digits of **`** **n `** , raised to successive powers of **`** **p `** , is equal to **n \* k** .

Put simply, we are looking for whether an integer ` exists **k** ` , for which it is satisfied:

**(a ^ p + b ^ (p+1) + c ^(p+2) + d ^ (p+3) + ... ) = n \* k**

The program should return -1 if such k does not exist.

**Input:**

* Integer ` **n** `: the number for which we are checking if an integer exists

**`** **k `** , such that the sum of its digits raised to successive powers of ` **p** `, to be equal to **n \* k** .

* Positive integer ` **p** `: power to which the digits of the

the number ` **n** `.

**Output:**

* Integer ` **k** ` , which satisfies the condition :
  + The sum of the digits of ` **n** ` , raised to successive powers of ` **p** ` , to be equal to **n \* k** .
* If such ` **k** ` does not exist, the function should return -1.

**Examples:**

|  |  |
| --- | --- |
| **Input** | **Output** |
| 92  1 | -1 |
| 695  2 | 2 |