Please, help the crazy linguist! He is trapped in his madness. He has developed a "Spanish Beauty Criterion" for words. It is defined as follows. Given a word w

$$w = x_1 x_2 x_3 \ldots x_n$$

(where n is the length of the word), he is interested in words which are formed by letters following pattern:

$$x_i \in \begin{cases} \{\text{bcdfghjklmnpqrstvwxyz}\} & \text{if } i \text{ is odd} \\ \{\text{aeiou}\} & \text{if } i \text{ is even} \end{cases}$$

and, also, in his madness, he won't allow a word that actually has i, j, and k, so that $x_i = x_j = x_k$ (that is, any letter can appear in the word at most two times).

Then, the "Spanish Beauty Criterion" (SBC) is defined as:

$$SBC(w) = \sum_{i \in 1 \ldots n} i * P(x_i)$$

where P is defined as the probability of appearance of a letter in Spanish, defined by the following table:

a	b	c	d	e	f	g	h	i	j	k	l	m
12.53	1.42	4.68	5.86	13.68	0.69	1.01	0.70	6.25	0.44	0.00	4.97	3.15

n	o	p	q	r	s	t	u	v	w	x	y	z
6.71	8.68	2.51	0.88	6.87	7.98	4.63	3.93	0.90	0.02	0.22	0.90	0.52

So, given a word w, of size n, our poor linguist wants to know **if this word is above or below the average of the SBC of all the words of size n that can be constructed following the above pattern and start with the same letter than w.**

Input

The input will have a first line with a number, N, the number of samples that will be entered to know if they are above or below the average. Following this first line, N lines with a word in each one (of at most seven characters each). All the input words follow the given pattern.

Output

The output will have N lines, each line corresponding to one input word in order, showing just 'above or equal' or 'below', depending on the value of the SBC of that word relative to the average of those of the same size.

Sample Input

```
5
bubu
terabit
hacer
qed
loco
```

Sample Output

```
below
above or equal
above or equal
above or equal
above or equal
```