

2245 Octal Fractions

Fractions in octal (base 8) notation can be expressed exactly in decimal notation. For example, 0.75 in octal is 0.963125 ($7/8 + 5/64$) in decimal. All octal numbers of n digits to the right of the octal point can be expressed in no more than $3n$ decimal digits to the right of the decimal point.

Write a program to convert octal numerals between 0 and 1, inclusive, into equivalent decimal numerals.

Input

The input to your program will consist of octal numbers, one per line, to be converted. Each input number has the form $0.d_1d_2d_3\dots d_k$, where the d_i are octal digits (0..7). There is no limit on k .

Output

Your output will consist of a sequence of lines of the form

$$.d_1d_2d_3\dots d_k \text{ [8]} = 0.D_1D_2D_3\dots D_m \text{ [10]}$$

where the left side is the input (in octal), and the right hand side the decimal (base 10) equivalent. There must be no trailing zeros, i.e. D_m is not equal to 0.

Sample Input

```
0.75
0.0001
0.01234567
```

Sample Output

```
0.75 [8] = 0.953125 [10]
0.0001 [8] = 0.000244140625 [10]
0.01234567 [8] = 0.020408093929290771484375 [10]
```