Interest (1) P85370_en

Given an initial capital c in euros, an annual interest rate i (expressed in %), a time t in years and an indication whether the interest is simple or compound, determine the amount of euros the initial capital is transformed into.

Input

The input consists of two strictly positive real numbers c and i, followed by a strictly positive integer t, followed by either the word "`simple`" or the word "`compound`".

Output

Write the final capital with 4 decimal places.

Observation

If you program in C++, use the `double` data type and put these two lines at the beginning of your `main()`:

```
cout.setf(ios::fixed);
cout.precision(4);
```

Sample input 1

```
1000 3 2 simple
```

Sample output 1

```
1060.0000
```

Sample input 2

```
1000 3 2 compound
```

Sample output 2

```
1060.9000
```

Sample input 3

```
1234.5 5.1 22 compound
```

Sample output 3

```
3687.6598
```

Problem information

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