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()`:

```cpp
    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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