

# Kata

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- [You have ranked up in Python!](#)

- 3 hours ago

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- 2

- [You have ranked up in C!](#)

- 19 hours ago

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- 6 kyu

- [Powerful you are. Your new overall rank is 6 kyu.](#)

- 2 weeks ago

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- 7 kyu

- [Respect. Your new overall rank is 7 kyu.](#)

- 2 weeks ago

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- [100+ Honor: You now have the ability to weigh in on the ranking of](#)

[beta kata!](#)

2 weeks ago

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[75+ Honor: You now have the ability to estimate the ranking of your own beta kata.](#)

2 weeks ago

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[50+ Honor: You now have the ability to mark comments as having spoiler code.](#)

2 weeks ago

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2 weeks ago

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[6 kyu](#)

[220](#)

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6 kyu

**Buying a car**5555558469% of 1,3721,520 of 7,287 [g964](#)

Python

Choose language...

C

Clojure

CoffeeScript

C++

Crystal

C#

Elixir

Fortran (Beta)

F#

Go

Haskell

Java

JavaScript

Julia (Beta)

Kotlin (Beta)

Nim (Beta)

OCaml (Beta)

PHP

PowerShell (Beta)

Prolog (Beta)

Python

R (Beta)

Racket (Beta)

Reason (Beta)

Ruby

Rust

Scala (Beta)

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Swift

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Details

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Collect|

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Take the Codewars ch

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```
Hey,  
<p>  
  As a codewars beta  
member I just  
completed training  
on the "Buying a  
car" kata. <a  
href="www.codewars.c  
om/r/G0a0cQ">Take  
the initiation</a>  
to join me and start
```

Send

Cancel

Let us begin with an example:

A man has a rather old car being worth \$2000. He saw a secondhand car being worth \$8000. He wants to keep his old car until he can buy the secondhand one.

He thinks he can save \$1000 each month but the prices of his old car and of the new one decrease of 1.5 percent per month. Furthermore this percent of loss increases of 0.5 percent at the end of every two months. Our man finds it difficult to make all these calculations.

**Can you help him?**

How many months will it take him to save up enough money to buy the car he wants, and how much money will he have left over?

**Parameters and return of function:**

parameter (positive int or float, guaranteed) startPriceOld (Old car price)  
parameter (positive int or float, guaranteed) startPriceNew (New car price)  
parameter (positive int or float, guaranteed) savingperMonth  
parameter (positive float or int, guaranteed) percentLossByMonth

`nbMonths(2000, 8000, 1000, 1.5)` should return `[6, 766]` or `(6, 766)`

### Detail of the above example:

```
end month 1: percentLoss 1.5 available -4910.0
end month 2: percentLoss 2.0 available -3791.7999...
end month 3: percentLoss 2.0 available -2675.964
end month 4: percentLoss 2.5 available -1534.06489...
end month 5: percentLoss 2.5 available -395.71327...
end month 6: percentLoss 3.0 available 766.158120825...
return [6, 766] or (6, 766)
```

where 6 is the number of months at **the end of which** he can buy the new car and 766 is the nearest integer to 766.158... (rounding 766.158 gives 766).

### Note:

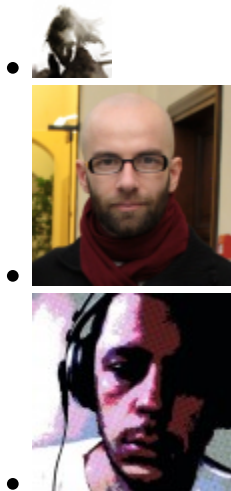
Selling, buying and saving are normally done at end of month. Calculations are processed at the end of each considered month but if, by chance from the start, the value of the old car is bigger than the value of the new one or equal there is no saving to be made, no need to wait so he can at the beginning of the month buy the new car:

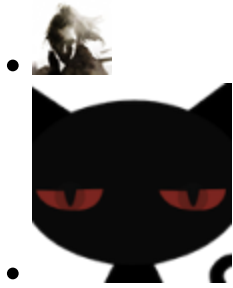
```
nbMonths(12000, 8000, 1000, 1.5) should return [0, 4000]
nbMonths(8000, 8000, 1000, 1.5) should return [0, 0]
```

We don't take care of a deposit of savings in a bank:-)

Fundamentals  
Mathematics  
Algorithms  
Numbers

### These users have contributed to this kata:





## Similar Kata:

5 kyu

[Build a Car](#)

66662396% of 42164 [frameture2 Issues Reported](#)

- 
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5 kyu

[Constructing a car #2 - Driving](#)

21211079% of 43186 [user5036852](#)

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Beta

[To buy or not to buy](#)

66183% of 264575 [radiocontrolled14 Issues Reported](#)

Status:Waiting for issues to be resolved

Estimated Rank:

8 kyu

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2 kyu

[Constructing a car #3 - On-Board Computer](#)

28281383% of 924 [user5036852](#)

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Beta

[Car Wars](#)

331100% of 12 [GMarco24](#)

**Status:**Testing & feedback needed

**Estimated Rank:**

4 kyu

- 

Beta

[Car Depreciation](#)

1818195% of 148626 [jbarget1 Issue Reported](#)

**Status:**Waiting for issues to be resolved

**Estimated Rank:**

7 kyu

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5 kyu

[Buying the Farm : Irrigation](#)

16164100% of 49 [gopheratl](#)

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6 kyu

[Traffic Lights - one car](#)

62621094% of 81258 [dinglemouse](#)

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**Other Kata Authored By g964:**

4 kyu

[Undirected acyclic weighted graph](#)2323690% of 1536 [g964](#)

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6 kyu

[Hidden "Cubic" numbers](#)98981787% of 193887 [g964](#)

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6 kyu

[Floating-point Approximation \(I\)](#)52522278% of 153606 [g964](#)

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6 kyu

## Experimenting with a sequence of complex numbers

16161086% of 47169g964

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**Stats:**

Created	May 6, 2015
Published	May 6, 2015
Warriors Trained	34819
Total Skips	10793
Total Code Submissions	79648
Total Times Completed	7287
Ruby Completions	225
Python Completions	1520
C# Completions	634
Java Completions	1001
Clojure Completions	55
JavaScript Completions	1369
Haskell Completions	50
CoffeeScript Completions	11
TypeScript Completions	150
C++ Completions	619
Elixir Completions	89
PHP Completions	458
Crystal Completions	3
F# Completions	34
C Completions	335

Rust Completions	192
Swift Completions	205
Go Completions	323
R Completions	52
Shell Completions	32
OCaml Completions	7
Fortran Completions	6
Julia Completions	14
Scala Completions	47
PowerShell Completions	11
Nim Completions	3
Reason Completions	1
Racket Completions	3
Kotlin Completions	35
Prolog Completions	2
Total Stars	555

% of votes with a positive feedback rating 69% of 1372

Total "Very Satisfied" Votes	740
Total "Somewhat Satisfied" Votes	420
Total "Not Satisfied" Votes	212

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