Exercise: Basic Syntax, Conditional Statements and Loops

Problems for exercise and homework for the Python Fundamentals Course @SoftUni.
Submit your solutions in the SoftUni judge system at https://judge.softuni.bg/Contests/1719.

1. Jenny's Secret Message

Jenny studies programming with Python and wants to create a program that **greets a user** when he/she gives his/her **name.** The greeting should be in a format **"Hello, {name}!"**. However, Jenny is in love with **Johnny** and would like to **greet him differently: "Hello, my love!"**. Can you help her?

Examples

Input	Output
Peter	Hello, Peter!
Amy	Hello, Amy!
Johnny	Hello, my love!

2. Drink Something

Kids drink **toddy**, **teens** drink **coke**, **young adults** drink **beer**, **adults** drink **whisky**. Create a program which receives an age and prints what they drink.

Rules:

Kid is defined as someone **under the age of 14**.

Teen is defined as someone **under the age of 18**.

Young adult is defined as someone **under the age of 21**.

Adult is defined as someone **above the age of 21**.

Note: All the values are **inclusive** except the **last one**!

Examples

Input	Output
13	drink toddy
17	drink coke
21	drink beer
30	drink whisky

3. Leonardo DiCaprio Oscars

Write a program that receives a **single integer** number and prints **different messages** depending on the number:

- If the number **is 88** - **"Leo finally won the Oscar! Leo is happy"**.
- If the number **is 86** - **"Not even for Wolf of Wall Street?!"**
- If the number is **not 88 nor 86** (and **below 88**) - **"When will you give Leo an Oscar?"**
- If the number is **over 88** - **"Leo got one already!"**

Examples

Input	Output
88	Leo finally won the Oscar! Leo is happy
86	Not even for Wolf of Wall Street?!
81	When will you give Leo an Oscar?
89	Leo got one already!

4. Double Char

You will be given a string. You should print a string in which each character (case-sensitive) is repeated twice.

Examples

Input	Output
Hello World	HHeelllloo WWoorrlldd
1234!	11223344!!

5. Can't Sleep? Count Sheep

If you can't sleep, just count sheep! You will be given a positive integer, 3 for example. You should return a string with a murmur: **"1 sheep...2 sheep...3 sheep..."**. Input will always be valid, i.e. integers greater than 0.

Examples

Input	Output
5	1 sheep...2 sheep...3 sheep...4 sheep...5 sheep...
1	1 sheep...

6. Next Happy Year

You are saying goodbye to your best friend: "*See you next happy year*". Happy Year is the year with only **distinct digits**, for example 2018. Write a program that receives an integer number and finds the next happy year.

Examples

Input	Output
8989	9012
1001	1023

7. Maximum Multiple

On the first line you will be given a **divisor**, on the second line - a **bound**. The **divisor** and the **bound** are only **positive integers**. You should find the largest integer **N**, such that:

- N is **divisible by the given divisor**
- N is **less than or equal to the given bound**

- N is **greater than 0**

Note: it is guaranteed that **N is found**.

Examples

Input	Output
2 7	6
10 50	50
37 200	185

8. * Mutate Strings

You will be given **two strings**. **Transform the first** string into **the second** one, **one letter at a time** and **print it.** Print only the **unique** strings.

Note: the strings will have the same lengths.

Examples

Input	Output
bubble gum turtle hum	tubble gum turble gum turtle gum turtle hum
Kitty Doggy	Ditty Dotty Dogty Doggy

9. * Easter Cozonacs

Since it is Easter you have decided to make some cozonacs and exchange them for eggs.

Create a program that **calculates** how much **cozonacs** you can make with the **budget** you **have**. **First**, you will **receive** your **budget**. Then, you will **receive** the **price** for **1 kg flour**. Here is the **recipe** for **one** cozonac:

Eggs	1 pack
Flour	1 kg
Milk	0.250 l

The **price for 1 pack of eggs** is **75%** of the **price for 1 kg flour**. The **price** for **1l milk** is **25% more** than price for **1 kg flour**. Notice, that you need **0.250l milk** for **one** cozonac and the calculated price is for **1l**.

Start cooking the cozonacs and **keep making** them until you have **enough budget**. Keep in mind that:

- For **every** cozonac that you make, you will receive **3 colored eggs**.
- For **every 3rd** cozonac that you make, you will lose some of your **colored** eggs **after** you have **received** the usual **3 colored eggs** for your cozonac. The count of eggs you will lose is calculated when you **subtract 2** from your **current count** of **cozonacs** – (**{currentCozonacsCount} – 2**)

In the end, print the cozonacs you made, the eggs you have gathered and the money you have **left**, **formatted** to the **2nd decimal place**, in the following format:

"You made {countOfCozonacs} cozonacs! Now you have {coloredEggs} eggs and {moneyLeft}BGN left."

Input / Constraints

- On the **1st line** you will receive the budget – a **real number** in the range [0.0…100000.0]
- On the **2nd line** you will receive the price for **1 kg flour** – a **real number** in the range [0.0…100000.0]
- The input will always be in the right format.
- You will **always** have a **remaining budget**.
- There will **not** be a case in which the **eggs** become a **negative count**.

Output

- In the end print the **count** of **cozonacs** you have made, the colored **eggs** you have gathered, and the **money formatted** to **the 2nd** decimal place in the format described above.

Examples

Input	Output
20.50 1.25	You made 7 cozonacs! Now you have 16 eggs and 2.45BGN left.
Comments	
We start by calculating the price for a **pack of eggs**, which is **75%** of the price for **1 kg** floor, which in this case is **1.25**. The pack of eggs price is **0.9375**. The price for **1l milk** is **25%** more than the price for **1kg** floor and in this case, it is – **1.5625**, but we need the price for 0.250ml, which is - **0.390625**. The total price for one cozonac is: **1.25** + **0.9375** + **0.390625** = **2.578125**. And we start subtracting the **price** for a **single** cozonac **from the budget**, and **for each cozonac** we receive **3** eggs. So, after the first **subtraction** we will have **17.921875** budget, **1** cozonac and **3** eggs. After the second - **15.34375** budget, **6** eggs, and on the **third** - **12.765625 budget** and **9 eggs** and since it's the **third**, we need to **subtract** the **lost eggs**, which will be 3 – 2 = **1**, so we subtract 1 from 9 and our **eggs** become **8**. We continue **subtracting** money from the **budget** until the money **are not enough** for us to make a cozonac. In the end we have 2.45BGN left.	

15.75 1.4	You made 5 cozonacs! Now you have 14 eggs and 1.31BGN left.

10. * Christmas Spirit

It is time to get in a Christmas mood. You need to decorate the house in time for the big event, but you have limited days to do so.

You will receive **allowed quantity** for **one type** of decoration and **days left** until Christmas day to decorate the house.

There are **4 types** of decorations and each piece costs a **price**

- Ornament Set – 2$ a piece
- Tree Skirt – 5$ a piece
- Tree Garlands – 3$ a piece
- Tree Lights – 15$ a piece

Every **second day** you buy an **Ornament Set** quantity of times and **increase** your Christmas spirit by **5**.

Every **third day** you buy **Tree Skirts** and **Tree Garlands** (both quantity of times) and **increase** your spirit by **13**.

Every **fifth day** you buy **Tree Lights** quantity of times and **increase** your Christmas spirit by **17**. If you have bought Tree Skirts and Tree Garlands at the **same day** you **additionally increase** your spirit by **30**.

Every **tenth day** you **lose 20 spirit**, because your cat ruins all tree decorations, and you should rebuild the tree and buy **one** piece of tree **skirt**, **garlands,** and **lights**. That is why you are forced to **increase** the allowed **quantity with 2** at the **beginning** of every **eleventh day**.

Also, if the **last day** is a **tenth day** the cat decides to demolish even more and ruins the Christmas turkey, and you **lose** additional **30 spirit**.

At the end you must print the **total cost** and the **gained spirit**.

Input / Constraints

The input will consist of **exactly 2 lines**:

- quantity – **integer in range [1…100]**
- days – **integer in range [1…100]**

Output

At the end print the **total cost** and the total gained **spirit** in the following format:

- **"Total cost: {budget}"**
- **"Total spirit: {totalSpirit}"**

Examples

Input	Output	Input	Output
1 7	Total cost: 37 Total spirit: 58	3 20	Total cost: 558 Total spirit: 156