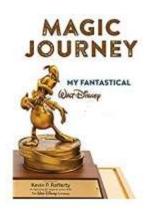
Disneyland Journey



You are planning a trip to Disneyland in the next year. Are you able to save money for it?

Create a program that checks if you can **save the money** for the Disneyland's journey. You have a **certain number of months** for which you can collect the money.

At the end of each month, you save 25% of the cost of the journey.

At the beginning of every odd month (except the first one) you spent 16% of the money collected so far for clothes and shoes.

Every **4**th (**fourth**) month **at the beginning of the month** your boss gives you a bonus. It is **25**% of the money collected so far.

If you save enough money for the journey, calculate how much money will be left for the souvenirs. Then print the following:

"Bravo! You can go to Disneyland and you will have {money} dollars for souvenirs."

If the saved money is less you should calculate how much money you need more. Then print the following:

"Sorry. You need {money} dollars more."

Both numbers should be **formatted** to the **2**nd **decimal place**.

Input

- On the **1**st **line** you will receive how much the journey will cost a **real number** in the range [500.0...10000.0]
- On the **2**nd **line** you will receive the **number of months** for which you have to collect money an **integer number** in the range [1...12]

Output

Print the output in the **format described above**.

Examples

Input	Output
1000	Bravo! You can go to Disneyland and
4	you will have 87.50 dollars for
	souvenirs.

Comments

You need 1000 dollars for the journey and you have 4 months to collect them. Every month you can save 1000 * 25% => 250 dollars. So, to the end of the **1st** month you have **250 dollars.** To the **end** of the **2nd** month - 250 + 250 -> 500 **dollars**. To the **begging** of the **3th** month (**odd month**) you spent **80 dollars**. (500 * 16%) for clothes and shoes, then you save **250 dollars**, so now you have **670 dollars**. Last month is the **fourth month** and you save 670 + 167.5 (670 * 25%) + 25 =**1087.5 dollars**. You have 1087.5 - 1000 =**87.5 dollars**, so you can go to the trip.

3265	Sorry. You need 1077.45 dollars more.
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