

```

a, b = input().split()
n = int(a + b)

flag = False
for i in range(n):
    if i ** 2 == n:
        flag = True
        break

print('Yes' if flag else 'No')

# Why is this code slow?

# This code is slow because it is using a brute force approach to find the square
↳ root of the input number. It is looping through every possible number
↳ starting from 0 until n. Note that the square root will be smaller than n, so
↳ at least half of the numbers it is looping through are unnecessary. At most,
↳ you need to loop through the numbers up to the square root of n.

# Improved version:

a, b = input().split()
n = int(a + b)

flag = False
for i in range(1000):
    if i ** 2 == n:
        flag = True
        break

print('Yes' if flag else 'No')

```

Figure 21: REFINE prompt for Code Optimization

I have some code. Can you give one suggestion to improve readability. Don't fix the code, just give a suggestion.

{code}

Figure 22: FEEDBACK prompt for Code Readability

I have some code. Can you give one suggestion to improve readability. Don't fix the code, just give a suggestion.

{code}

{suggestion}

Now fix the code.

Figure 23: REFINE prompt for Code Readability

###

Concepts: ['create', 'ferry', 'silhouette', 'stream', 'terminal']

Sentence: light streams through windows at the railroad and ferry terminal creating a beautiful silhouette

###

Concepts: ['chair', 'couch', 'hang', 'room', 'wall']

Sentence: A room with a couch, chairs and art hanging on the wall.

###

Concepts: ['boat', 'building', 'harbour', 'moor', 'quay']

Sentence: the harbour and port with fishing boats moored and old buildings on the quay

###

Concepts: ['admirer', 'arrive', 'commander', 'crowd', 'greet']

Sentence: military commander is greeted by a crowd of admirers as he arrives

Figure 24: Initial generation prompt for Constrained Generation (truncated)

###

Concepts: ['animal', 'catch', 'horse', 'lasso', 'ride']

Sentence: The horse catches the lasso and rides on it.

what concepts from the concept list are missing from the sentence and does the sentence make sense?

Concept Feedback: animal

Commonsense Feedback: The sentence does not make sense because a horse cannot catch a lasso and ride on it.

###

Concepts: ['animal', 'catch', 'horse', 'lasso', 'ride']

Sentence: A horse is being caught by a cowboy with a lasso.

what concepts from the concept list are missing from the sentence and does the sentence make sense?

Concept Feedback: animal, ride

Commonsense Feedback: NONE

Figure 25: FEEDBACK prompt for Constrained Generation (truncated).