## **Happy Number**

Try to solve the Happy Number problem.



### **Statement**

Write an algorithm to determine if a number n is a happy number.

We use the following process to check if a given number is a happy number:

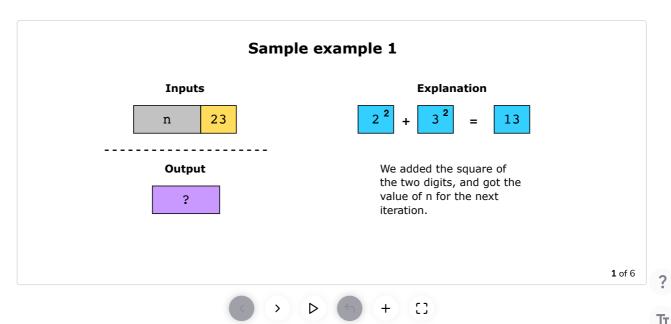
- Starting with the given number n, replace the number with the sum of the squares of its digits.
- Repeat the process until:
  - $\circ$  The number equals 1, which will depict that the given number n is a happy number.
  - $\circ~$  It enters a cycle, which will depict that the given number n is not a happy number.

Return TRUE if n is a happy number, and FALSE if not.

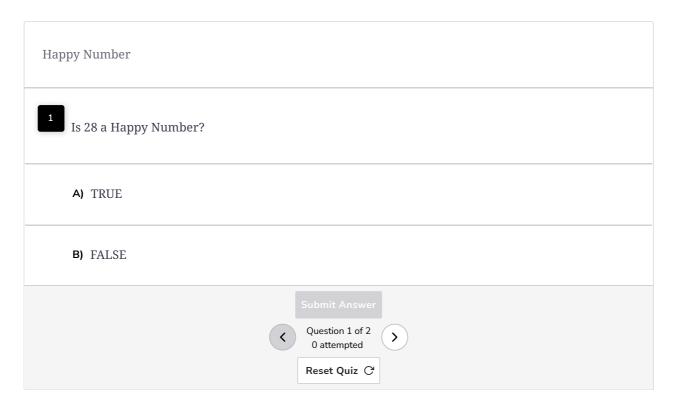
#### **Constraints**

• 
$$1 \le n \le 2^{31} - 1$$

### **Examples**

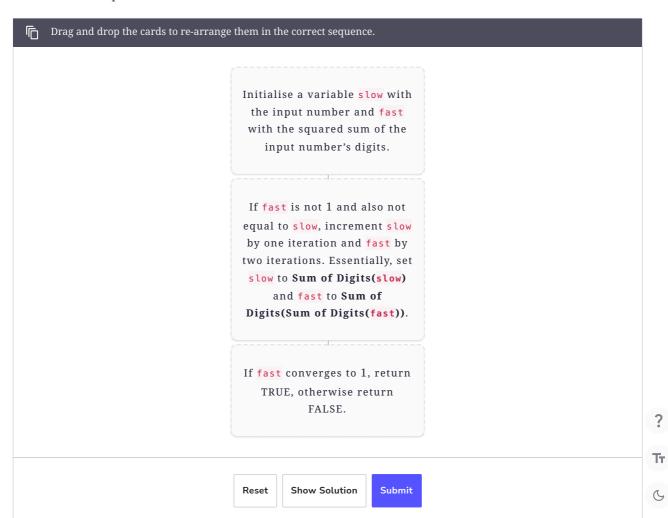


Let's take a moment to make sure we have correctly understood the problem. The quiz below helps us to check that we are solving precisely the right problem:



## Figure it out

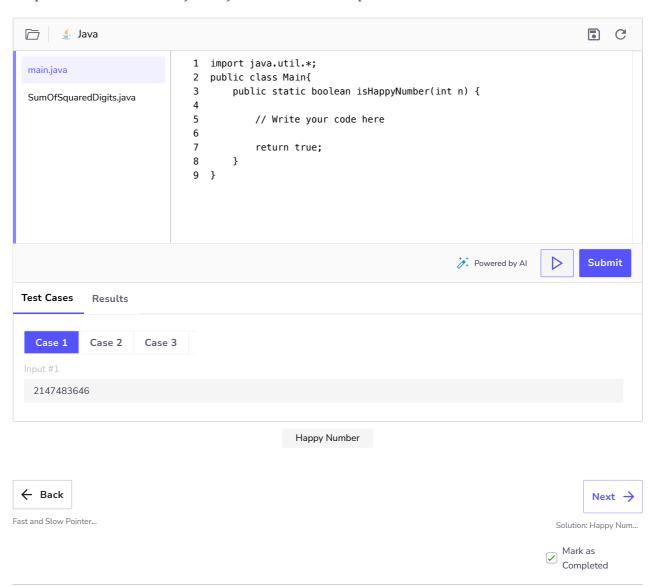
We have a game for you to play: re-arrange the logical building blocks to develop a clearer understanding of how to solve this problem.



# Try it yourself



template in the other file that you may build on to solve this problem.



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