Question #2: Happy Number

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

A **happy number** is a number defined by the following process:

- Starting with any positive integer, replace the number by the sum of the squares of its digits.

- Repeat the process until the number equals 1 (where it will stay), or it **loops endlessly in a cycle** which does not include 1.

- Those numbers for which this process **ends in 1** are happy.

Return true *if* n *is a happy number, and* false *if not*.

Example 1:

Input: n = 19

Output: true

Explanation:

$1^2 + 9^2 = 82$

$8^2 + 2^2 = 68$

$6^2 + 8^2 = 100$

$1^2 + 0^2 + 0^2 = 1$

Example 2:

Input: n = 2

Explanation:

$2^2 = $ **4**
$4^2 = 16$
$1^2 + 6^2 = 37$
$3^2 + 7^2 = 58$
$5^2 + 8^2 = 89$
$8^2 + 9^2 = 145$
$1^2 + 4^2 + 5^2 = 42$
$4^2 + 2^2 = 20$
$2^2 + 0^2 = $ **4** (This number has already been seen)

Output: false