

PromptScratchpadOur Solution(s)Video Explanation

Run Code

Solution 1Solution 2

```
1 # Copyright © 2020 AlgoExpert, LLC. All rights reserved.
2
3 # O(n^3 + m) time | O(n + m) space - where n is the number of digits in Pi and m is the number of favorite numbers
4 def numbersInPi(pi, numbers):
5     numbersTable = {number: True for number in numbers}
6     minSpaces = getMinSpaces(pi, numbersTable, {}, 0)
7     return -1 if minSpaces == float("inf") else minSpaces
8
9
10 def getMinSpaces(pi, numbersTable, cache, idx):
11     if idx == len(pi):
12         return -1
13     if idx in cache:
14         return cache[idx]
15     minSpaces = float("inf")
16     for i in range(idx, len(pi)):
17         prefix = pi[idx : i + 1]
18         if prefix in numbersTable:
19             minSpacesInSuffix = getMinSpaces(pi, numbersTable, cache, i + 1)
20             minSpaces = min(minSpaces, minSpacesInSuffix + 1)
21     cache[idx] = minSpaces
22     return cache[idx]
23
```