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104.py x

1 import itertools
2
3 def get_value(word, substitution):
4     s = 0
5     factor = 1
6     for letter in reversed(word):
7         s += factor * substitution[letter]
8         factor *= 10
9     return s
10
11 def solve2(equation):
12     left, right = equation.lower().replace(' ', '').split('=')
13     left = left.split('+')
14     letters = set(right)
15     for word in left:
16         for letter in word:
17             letters.add(letter)
18     letters = list(letters)
19
20     digits = range(10)
21     for perm in itertools.permutations(digits, len(letters)):
22         sol = dict(zip(letters, perm))
23
24         if sum(get_value(word, sol) for word in left) == get_value(right, sol):
25             print(' '.join(str(get_value(word, sol)) for word in left) + " = " + str(get_value(right, sol, sol)))
26
27 print(EAT + THAT = APPLE)
28
29 solve2('POINT + ZERO = ENERGY')
```

104: expl.3/104.py - Stop x

Run Command: 104: expl.3/104.py Runner: Python 3 CWD: ENW

EAT + THAT = APPLE

74285 + 6834 = 80319 (mapping: {'r': 3, 'e': 0, 'p': 7, 't': 5, 'n': 8, 'i': 2, 'z': 6, 'o': 4, 'g': 1, 'y': 9})

58369 + 3844 = 62213 (mapping: {'r': 4, 'e': 0, 'p': 5, 't': 9, 'n': 6, 'i': 3, 'z': 2, 'o': 8, 'g': 1, 'y': 7})

7138 + 9841 = 16979 (mapping: {'r': 4, 'e': 0, 'p': 7, 't': 5, 'n': 8, 'i': 3, 'z': 9, 'o': 1, 'g': 2, 'y': 6})

62479 + 8852 = 71331 (mapping: {'r': 5, 'e': 0, 'p': 6, 't': 9, 'n': 7, 'i': 4, 'z': 8, 'o': 2, 'g': 3, 'y': 1})

38549 + 2884 = 41433 (mapping: {'r': 0, 'e': 0, 'p': 3, 't': 9, 'n': 4, 'i': 5, 'z': 2, 'o': 8, 'g': 1, 'y': 7})

71542 + 9881 = 81423 (mapping: {'r': 6, 'e': 0, 'p': 7, 't': 2, 'n': 8, 'i': 5, 'z': 9, 'o': 1, 'g': 4, 'y': 3})

98584 + 3168 = 101752 (mapping: {'r': 6, 'e': 1, 'p': 9, 't': 4, 'n': 0, 'i': 5, 'z': 3, 'o': 8, 'g': 2, 'y': 2})

42558 + 8872 = 51430 (mapping: {'r': 2, 'e': 0, 'p': 4, 't': 9, 'n': 5, 'i': 8, 'z': 6, 'o': 1, 'g': 3, 'y': 1})

38735 + 6884 = 45619 (mapping: {'r': 8, 'e': 0, 'p': 2, 't': 5, 'n': 3, 'i': 7, 'z': 6, 'o': 4, 'g': 1, 'y': 9})

31745 + 9881 = 41626 (mapping: {'r': 8, 'e': 0, 'p': 3, 't': 5, 'n': 4, 'i': 7, 'z': 9, 'o': 1, 'g': 2, 'y': 6})

51762 + 9881 = 61643 (mapping: {'r': 0, 'e': 0, 'p': 5, 't': 2, 'n': 6, 'i': 7, 'z': 9, 'o': 1, 'g': 4, 'y': 3})