4 Write the python program for Cript-Arithmetic problem

import itertools

def solve\_cryptarithmetic():

# Example puzzle: SEND + MORE = MONEY

letters = 'SENDMORY'

digits = '0123456789'

# Generate all possible assignments of digits to letters

for perm in itertools.permutations(digits, len(letters)):

assign = dict(zip(letters, perm))

# Skip if leading letters are zero

if assign['S'] == '0' or assign['M'] == '0':

continue

# Convert words to numbers

send = int("".join(assign[c] for c in "SEND"))

more = int("".join(assign[c] for c in "MORE"))

money = int("".join(assign[c] for c in "MONEY"))

# Check equation

if send + more == money:

print("✅ Solution Found!")

print(f"SEND = {send}")

print(f"MORE = {more}")

print(f"MONEY = {money}")

return

print("❌ No solution found.")

if \_\_name\_\_ == "\_\_main\_\_":

solve\_cryptarithmetic()

