121. Class Problem : P and NP Problems
Code:

```python
def is_subset_sum(nums, target_sum):
    def subset_sum_recursive(nums, n, target_sum):

        if target_sum == 0:
            return True
        if n == 0 and target_sum != 0:
            return False

        if nums[n-1] > target_sum:
            return subset_sum_recursive(nums, n-1, target_sum)


        return subset_sum_recursive(nums, n-1, target_sum) or
subset_sum_recursive(nums, n-1, target_sum-nums[n-1])

    return subset_sum_recursive(nums, len(nums), target_sum)

nums = [3, 34, 4, 12, 5, 2]
target_sum = 9
print(is_subset_sum(nums, target_sum))

target_sum = 30
print(is_subset_sum(nums, target_sum))
```

output:

```
PS C:\Users\karth>
PS C:\Users\karth> & C:/Users/karth/AppData/Local/Programs/Python/Python312/python.exe c:/Users/karth/OneDrive/Documents/OriginLab/problem.py
True
False
PS C:\Users\karth>
```

Time complexity:

$F(n) = o(2^n)$