Target Sum

I/p: nums [] = {1, 1, 1, 1, 1}

target = 3

O/p: 5

↳ we have 2 choices +/−

+1 -1 -1 +1 -1

2 − 3 = −1

+ −

Target Sum

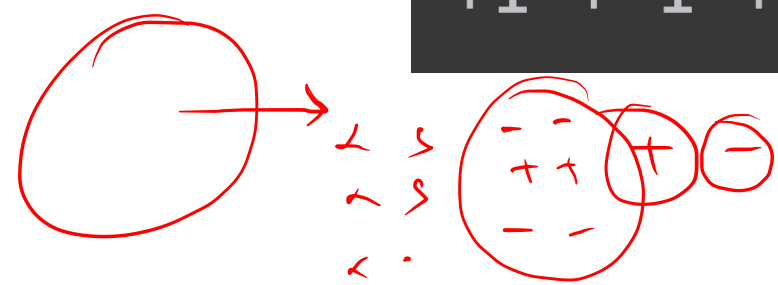
4-1 = (3)

I/p: nums[] = {1, 1, 1, 1, 1}
target = 3

O/p: 5

↳ we have 2 choices +/−

−1 + 1 + 1 + 1 + 1 = 3
+1 − 1 + 1 + 1 + 1 = 3
+1 + 1 − 1 + 1 + 1 = 3
+1 + 1 + 1 − 1 + 1 = 3
+1 + 1 + 1 + 1 − 1 = 3



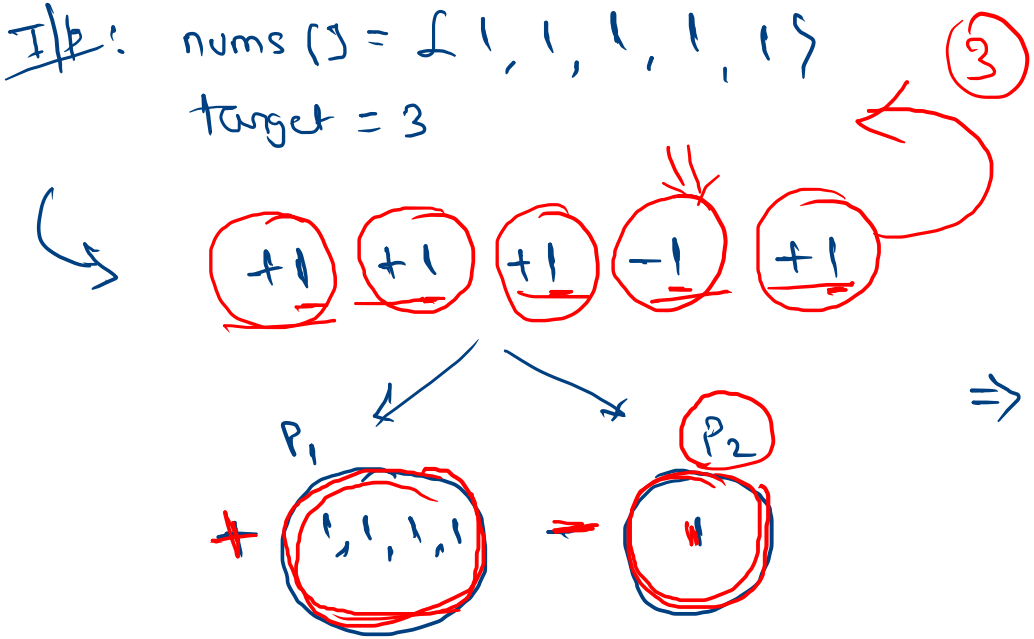
(3) ways

DP

Logic

I/p: nums[] = {1, 1, 1, 1, 1}

target = 3



$(+a \; +b \; +c \; -d \; -f \; +g)$

$+(a+b+c+g) - (d+f)$

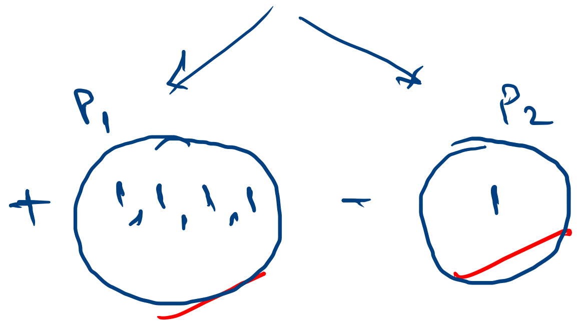
$\Rightarrow P_1 - P_2 = \text{Target}$ ★

Logic

I/p: nums[] = {1, 1, 1, 1, 1} → Sum

target = 3

→ +1 +1 +1 −1 +1



P_1 → $(T+S)/2$

P_2 → $S - P_1$

⇒ $P_1 - P_2 = \text{Target}$

⇒ $(P_1 + P_2) = \text{Sum}$

$2P_1 = (\text{Target} + \text{Sum})$

$P_1 = (\text{Target} + \text{Sum})/2$

P_1 → $(T+S)/2$ — even ✓

↓ Odd ✗

○ → deci ✗

Logic

I/p: nums[] = {1, 1, 1, 1, 1}

target = 3

→ sum = 23

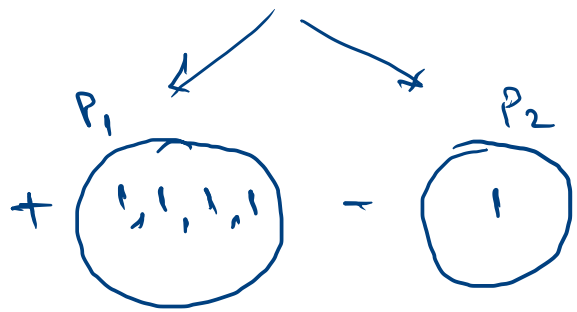
(T+S)/2

P1 → P2

S - P1

S = ??

↳ +1 +1 +1 −1 +1



⇒ $P_1 - P_2 = Target$

⇒ $P_1 + P_2 = Sum$

$2P_1 = (Target + Sum)$

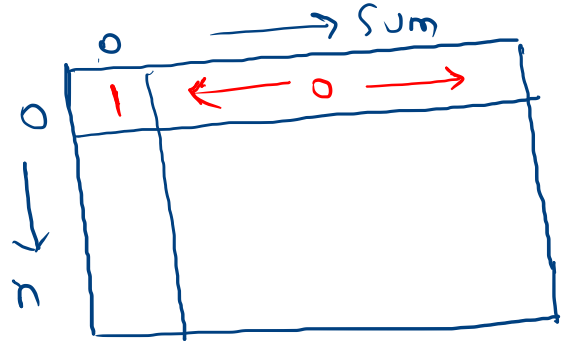
$P_1 = (Target + Sum)/2$

⇓

How, question is again reduced to

* find number of subset which has sum = (T+S)/2

→ { }
{ 1 }
{ 1 }



In question, it's given that we have non-ve Integers [Base Cond'] ✓

we know the Base Condition.

In question target may be -ve

Sum <= abs(target)

Edge case