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- **The four consecutive numbers= n, n+1, n+2, n+3**

The outer numbers multiplied together= n*(n+3)=$n^2 + 3n$
The inner numbers multiplied together= (n+1)(n+2)=$n^2 + 3n + 2$

This shows that no matter what number "n" is represented by, the inner two numbers multiplied together will always have a total of 2 more than the outer numbers.

- examples: 1,2,3,4,
- **1x4=4, 2x3=6 6-4=2**

- **The five consecutive numbers= n, n+1, n+2, n+3, n+4**

The outer numbers multiplied together= n*(n+4) = $n^2 + 4n$
The secondary outer numbers multiplied together= (n+1)(n+3)=$n^2 + 4n + 3$

This shows that no matter what number "n" is represented by, the secondary inner numbers will have a multiplication total of 3 more than the multiplication total of the outer numbers.

- **My prediction;**

I believe the more consecutive numbers you add the bigger difference there will be, for example: the 4 consecutive numbers have a difference of 2 when the formula is carried out, and when there are 5 consecutive numbers, then there is a difference of 3 when the formula is carried out, so i believe when i calculate the 6 consecutive numbers then there will be a difference of 4 when the formula is carried out. I will try to prove this below.

- **The six consecutive numbers: n, n+1, n+2, n+3, n+4, n+5**

The outer numbers multiplied together= n*(n+5)=$n^2 + 5n$
The secondary outer numbers multiplied together= (n+1)(n+4)=$n^2 + 5n + 4$
Examples; 1,2,3,4,5,

- **Deducting from the 3 different equations I wrote including 4, 5 and 6 consecutive numbers, I can conclude that the more consecutive numbers there are, the higher the remainder will be, adding 1 remainder on to the total amount of remainders per each consecutive number added.**

- **The 4 odd numbers: 2n+1, 2n+3, 2n+5, 2n+7**

The outer numbers multiplied together= (2n+1)(2n+7)=$4n^2 + 16n + 7$

The secondary outer numbers multiplied together =(2n+3)(2n+5)=$4n^2 + 16n + 15$

This shows that no matter what odd number “n” is represented by, the secondary outer numbers multiplied together will always have 8 more in their remainder than the outer numbers multiplied together.

Example:
3, 5, 7, 9
5 x 7 = 35
3 x 9 = 27
35 - 27= 8

- **The 4 even numbers: 2n, 2n+2, 2n+4, 2n+6**

The outer numbers multiplied together= 2n(2n+6)= $4n^2 + 12n$

The secondary numbers multiplied together= (2n+2)(2n+4)= $4n^2 + 12n + 8$

This shows that no matter what even number “n” is represented by, the secondary outer numbers multiplied together will always have 8 more in their remainder than the outer numbers multiplied together.

Example:
2, 4, 6, 8
2 x 6 = 24
2 x 8 = 16
24 - 16 = 8

- **Both the even number calculation and odd number calculation are different from each other, yet have the same outcome.**