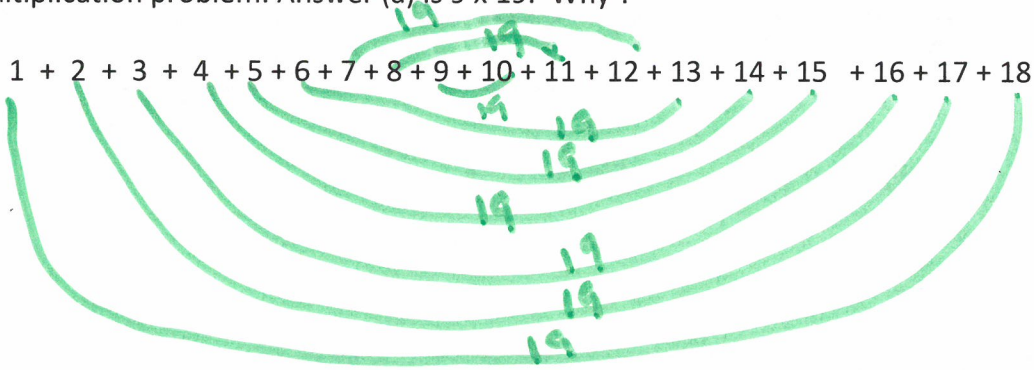
CW

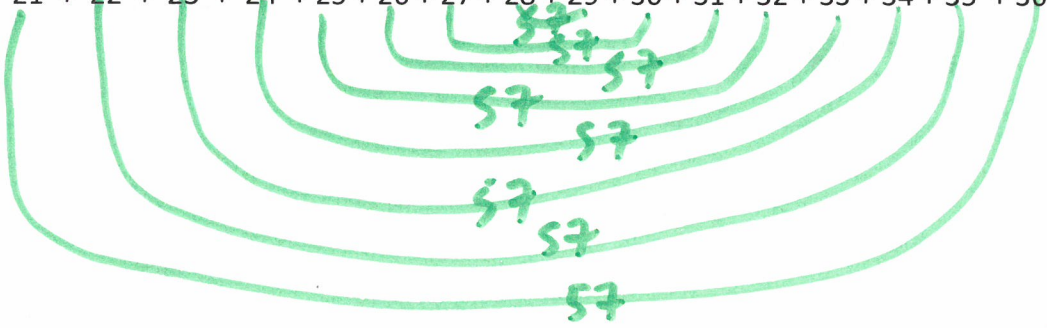
1. GAUSS

FIND THE SUM, using any method. You do not need to find the final answer – just the multiplication problem. Answer (a) is 9 x 19. Why ?

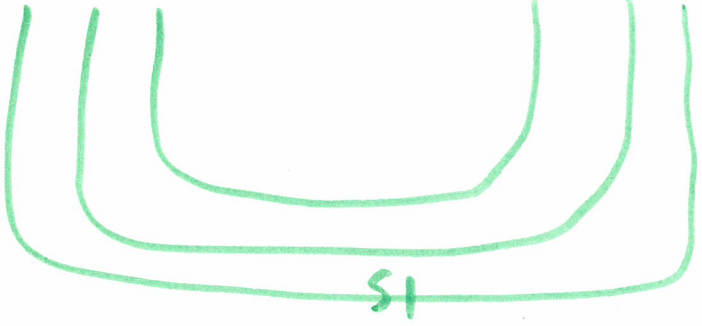
a) 1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 10 + 11 + 12 + 13 + 14 + 15 + 16 + 17 + 18 = 9x19



b) 21 + 22 + 23 + 24 + 25 + 26 + 27 + 28 + 29 + 30 + 31 + 32 + 33 + 34 + 35 + 36 = 8x57



c) 1 + 2 + 3 + 4 + 5 ..... 46 + 47 + 48 + 49 + 50 = 25x51



There are 50 #'s, so 25 pairs of 51

d) Find the sum of the first 20 odd numbers. Is there a shortcut to find out what the 20th odd number is? 400

1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39

20 #'s
10 pairs of 40

40
40

2. Patterns

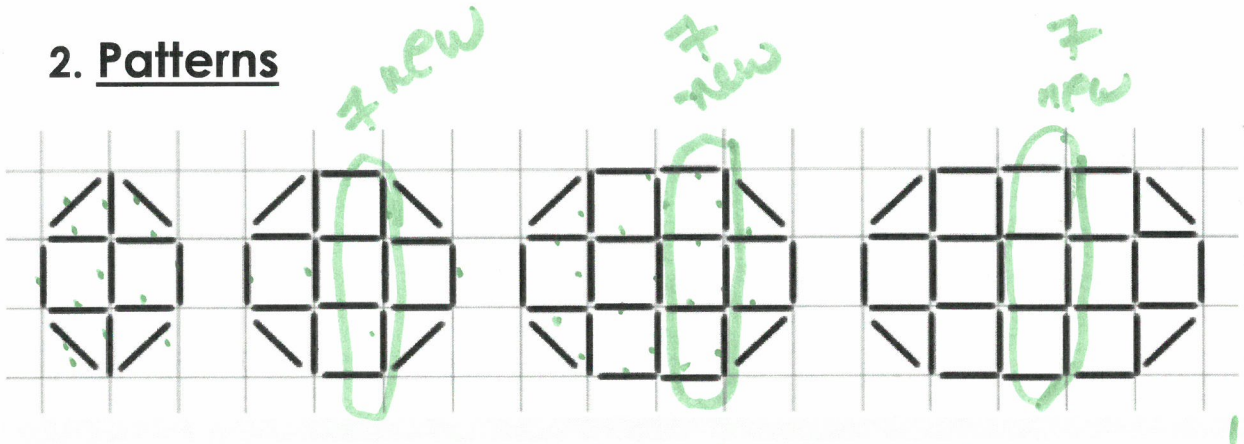


Fig. 1 Fig. 2 Fig. 3 Fig 4

Can you fill in the blanks?

	Fig 1	Fig 2	Fig 3	Fig 4	Fig5 5	LEVEL 3: Fig # 43?
Number of tooth-picks?	8 13	12 20	27	34	41	

Fig 0 would have 6. (13-7)

Each new figure adds 7.

$6 + 43 \times 7 = 307$

↑ Level Zero

↑ Level 43

↑ (per level)