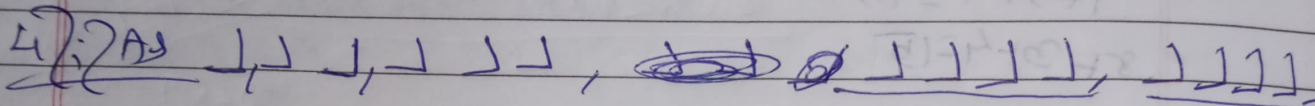


i) \Rightarrow 15th Figure has = $3 \times 15 + 4$
= 49 matches

2) 40th Figure has = $3 \times 40 + 4$
= 124 matches

iii) \Rightarrow It is clear that each time the Figure (n) is increased by 4, the number of matches (s) are increased by 3.

4) \Rightarrow 

i) \Rightarrow

N	1	2	3	4	5
L	2	4	6	8	10

Hence, the table is given above.

iii) \Rightarrow Hence, the value of L is $L = 2n$

iv) \Rightarrow Number of matchsticks in 12th Figure = $2 \times 12 = 24$

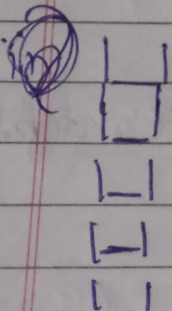
2) Number of matchsticks in 20th Figure = $2 \times 20 = 40$

HW

5) a) \Rightarrow

N	1	2	3	4
P	5	8	11	14

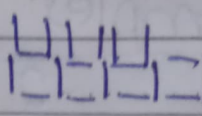
$P = 3n + 2$



i) \Rightarrow 16th = $16 \times 3 + 2 = 48 + 2 = 50$
30th = $30 \times 3 + 2 = 90 + 2 = 92$

b) i)

N	1	2	3	4
F	5	9	13	17

 $F = 4n + 1$ 

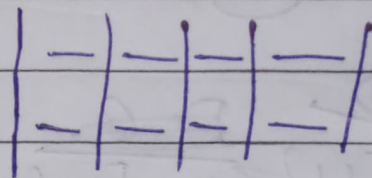
ii) $16^{\text{th}} = 16 \times 4 + 1 = 64 + 1 = 65$, $30^{\text{th}} = 30 \times 4 + 1 = 120 + 1 = 121$

c) i)

N	1	2	3	4	5	6
F	8	13	18	23	28	33

 $F = 5n + 3$

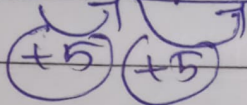
ii) $16^{\text{th}} = 5 \times 16 + 3 = 83$
 $30^{\text{th}} = 5 \times 30 + 3 = 150 + 3 = 153$



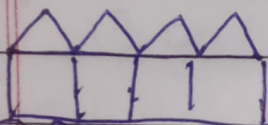
d) i)

N	1	2	3
F	6	11	16

 $F = 5n + 1$



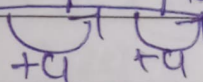
ii) $16^{\text{th}} = 81$ mathematics
 $30^{\text{th}} = 151$ mathematics

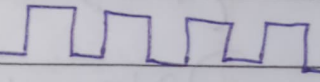


e) i)

N	1	2	3
F	5	9	13

 $4n + 1$

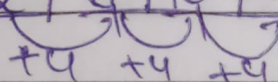


ii) 65 and 121 

f) i)

N	1	2	3	4
F	2	6	10	14

 $4n - 2$



ii) 62 and 118 