12/5/21

Exercise - 5(F)

(1)

i) $1 \times 9 + 1 = 10$

$12 \times 9 + 2 = 110$

$123 \times 9 + 3 = 1110$

$1234 \times 9 + 4 = 11110$

$12345 \times 9 + 5 = 111110$

$123456 \times 9 + 6 = 1111110$

ii) $9 \times 9 + 7 = 88$

$98 \times 9 + 6 = 888$

$987 \times 9 + 5 = 8888$

$9876 \times 9 + 4 = 88888$

$98765 \times 9 + 3 = 888888$

$987654 \times 9 + 2 = 8888888$

iii) $1 \times 8 + 1 = 9$

$12 \times 8 + 2 = 98$

$123 \times 8 + 3 = 987$

$1234 \times 8 + 4 = 9876$

$12345 \times 8 + 5 = 98765$

$123456 \times 8 + 6 = 987654$

iv) $111 \div 3 = 37$

$222 \div 6 = 37$

$333 \div 9 = 37$

$444 \div 12 = 37$

$555 \div 15 = 37$

$666 \div 18 = 37$

②

i)

6	7	(2)
(1)	5	9
8	(3)	4

ii)

4	(9)	8
11	7	(3)
(6)	(5)	10

iii)

16	2	(12)
(6)	10	(14)
(8)	(18)	4

③

i) S- 1 2 3 4

n- 7 10 13 16

$S = 3n + 4$

$\boxed{S = 3n + 4}$

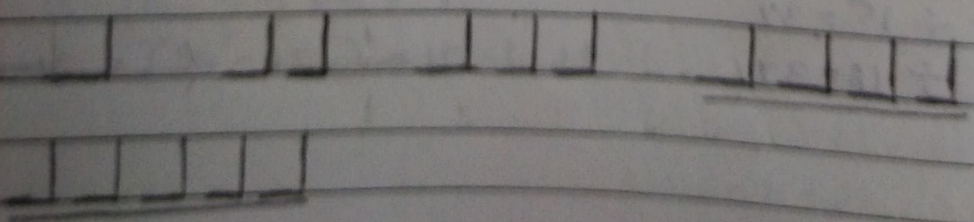
ii) $S = 15n + 4 = (15 \times 3) + 4 = 49$

② $S = 40n + 4 = (40 \times 3) + 4 = 124$

③ Number of matchsticks is equal to more than 3 times & add 1 the number of figures.

④

①



(ii)

Figure = f	1	2	3	4	5
Number = n	2	4	6	8	10

(iii) $F = L$

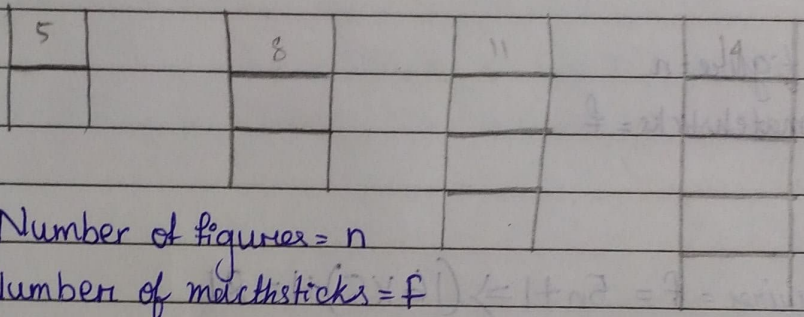
So, $L = 2n$

(iv) (1) 12^{th} figure required $= 2n = 2 \times 12 = 24$

(2) 20^{th} figure required $= 2n = 2 \times 20 = 40$

(5)

(a)(i)



(1) Number of figures = n

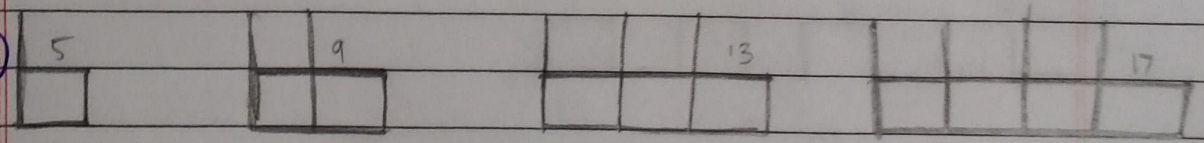
Number of matchsticks = f

$f = 3n + 2$

(2) 16^{th} figure required $= f = 3n + 2 \Rightarrow (16 \times 3) + 2 = 50$

30^{th} figure required $= f = 3n + 2 \Rightarrow (30 \times 3) + 2 = 92$

(b)



(i) Number of figures = n

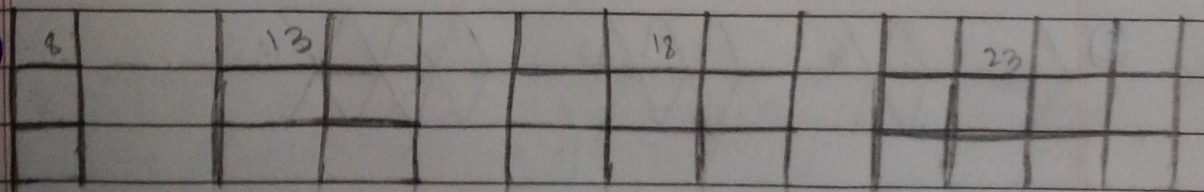
Number of matchsticks = f

$f = 4n + 1$

(ii) 16^{th} figure required $= f = 4n + 1 \Rightarrow (16 \times 4) + 1 = 65$.

30^{th} figure required $= f = 4n + 1 \Rightarrow (30 \times 4) + 1 = 121$.

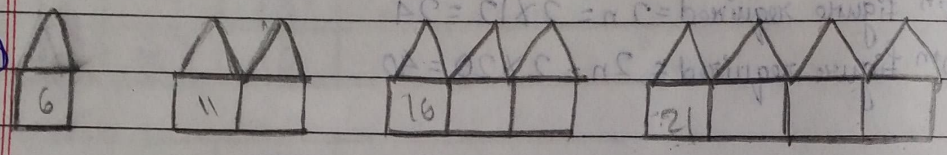
(c)



(i) Numbers of figures = n
Numbers of matchsticks = f.
$f = 5n + 3$.

(ii) 16^{th} figure requires = $f = 5n+3 \Rightarrow (16 \times 5) + 3 = 83$.
30^{th} figure requires = $f = 5n+3 \Rightarrow (30 \times 5) + 3 = 153$

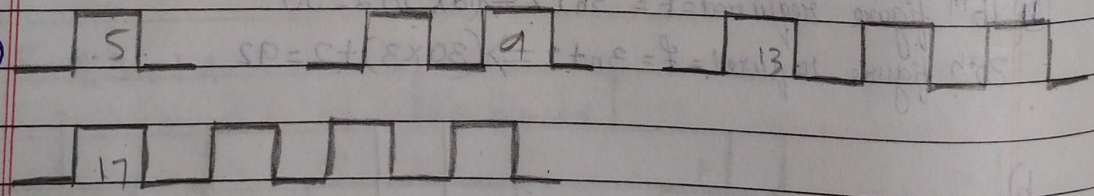
(d)



(i) Number of figure = n
Number of matchsticks = f
$f = 5n + 1$.

(ii) 16^{th} figure requires = $f = 5n+1 \Rightarrow (16 \times 5) + 1 = 81$
30^{th} figure requires = $f = 5n+1 \Rightarrow (30 \times 5) + 1 = 151$

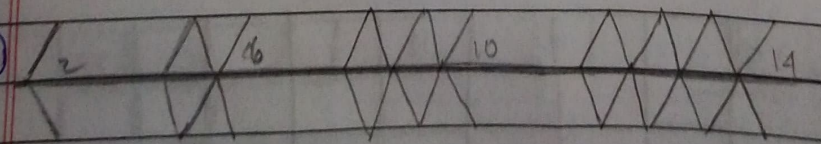
(e)



(i) Number of figure = n
Number of matchsticks = f
$f = 4n + 1$

(ii) 16^{th} figure requires = $f = 4n+1 \Rightarrow (16 \times 4) + 1 = 65$.
30^{th} figure requires = $f = 4n+1 \Rightarrow (30 \times 4) + 1 = 121$

(f)



(i) Number of figures = n

Number of matchsticks = f

~~$f = 4n + 2$~~

$f = 4n - 2$

(ii) 16^{th} figure requires = $f = 4n - 2 \Rightarrow (16 \times 4) - 2 = 62$.

30^{th} figure requires = $f = 4n - 2 \Rightarrow (30 \times 4) - 2 = 118$.