i) 

HW

5) a)

N	1	2	3	4	5
S	5	8	11		

i) Hence, the value of F is,

3n.

ii) 16th Figure = 3 x 16 = 48 matchsticks

30th figure = 3 x 30 = 90 matchsticks

b)

N	1	2	3
S	5	9	13

i) Hence, the value of F is,

4n.

ii) 16th figure = 4 x 16 = 64 matchsticks

30th figure = 4 x 30 = 120 matchsticks.

c)

N	1	2	3
S	8	13	18

i) Hence, the value of F is,

5n

ii) 16th Figure = 16 x 5 = 80 matchsticks

30th figure = 5 x 30 = 150 matchsticks

W

7/5/21

Ex. 5.F

1. FOR EACH PATTERN, GIVEN BELOW, WRITE THE NEXT THREE STEPS

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) $9876 \times 9 + 4 = 88888$

$98765 \times 9 + 3 = 888888$

$987654 \times 9 + 2 = 8888,888$

iii) $1234 \times 8 + 4 = 9876$

$12345 \times 8 + 5 = 98765$

$123456 \times 8 + 6 = 987654$

iv) $444 \div 12 = 37$

$555 \div 15 = 37$

$666 \div 18 = 37$

2. COMPLETE EACH OF THE FOLLOWING MAGIC SQUARES

i)

6	7	2
1	5	9
8	3	4

ii)

4	3	8
11	7	-3
0	5	10

iii)

16	2	12
6	10	14
8	18	4

4	9	8
11	7	3
6	5	10

16	2	12
6	10	14
8	18	4

3. SEE THE FOLLOWING PATTERN CAREFULLY

1st fig

i) N = 1

$S = 3n + 4 = 7$

2nd fig

N = 2

$3n + 4 = 3 \times 2 + 4 = 10$

ii) 1) 15th figure

N = 15

$3n + 4 = 3 \times 15 + 4$

= 49 matchsticks.

2) 40th figure

N = 40

$3n + 4 = 3 \times 40 + 4$

= 124 matches.

iii) It is clear that each time the figure (n) is increased by 4, the no. of matches are increased by 3.

4. IN THE FOLLOWING PATTERN, DRAW THE NEXT TWO FIGURES

ii)

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

iii) Value of L is 2n

iv) 1) No. of matchsticks in 12th figure = $2 \times 12 = 24$

2) No. of matchsticks in 20th figure = $2 \times 20 = 40$

d)

N	1	2	3
S	6	11	16

i) Hence, value of F is,

5n

ii) 16th Figure - 5 x 16 = 80 matchsticks

30th Figure - 5 x 30 = 150 matchsticks.

e)

N	1	2	3
S	5	9	13

i) Hence, value of F is

4n

ii) 16th Figure → 4 x 16 = 64 matchsticks

30th Figure → 4 x 30 = 120 matchsticks.

f)

N	1	2	3
S	2	6	10

i) Hence, value of F is

4n

ii) 16th Figure → 4 x 16 = 64 matchsticks

30th Figure → 4 x 30 = 120 matchsticks.

11/8/21

OPERATIONS ON NUMBER LINE/ INTEGERS

adding positive and negative integers

1) $(-2) + 5 = +8 = 3$
2) $-5 + 2 = -3$
3) $-5 + 8 = 3$
4) $-8 + 7 = -1$
5) $-5 - 2 = -7$
   $-5 - 6 = -11$
6) $(-5) + (-6) = -5 - 6 = -11$

EVALUATION QUESTION

4) Add

i) $13 + 15 = 28$
ii) $-13 + 15 = 2$
iii) $13 + -15 = -2$
iv) $-13 + -15 = -28$

5) Add

i)	ii)	iii)	iv)	v)	vi)
259	-528	-628	-473	-622	257
+214	+-243	+326	+258	+-254	+-254
473	-771	-297	-215	-876	3

6) SUBTRACT

i)	ii)	iii)	iv)	v)	vi)
8	8	-7	-2	12 → 12	-6 → -6
-5	+5	-4	+8	--3 → +-3	--3 → +3
3	13	-3	6	9	-3

7) SUBTRACT