

07-06-2021

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) $9876 \times 9 \times 4 = 88888$

$98765 \times 9 \times 3 = 888888$

$987654 \times 9 \times 2 = 8888888$

iii) ~~$1234 \times 8 + 4 = 987$~~ $1234 \times 8 \times 4 = 9876$

$1234 \times 8 \times 3 = 98765$

$123456 \times 8 \times 6 = 987654$

iv) $444 \div 12 = 37$

$555 \div 15 = 37$

$666 \div 18 = 37$

2) Complete each of the following magic squares:

i)

6	7	<u>2</u>
<u>1</u>	5	9
8	<u>3</u>	4

ii)

4	<u>9</u>	8
<u>11</u>	7	3
<u>6</u>	<u>5</u>	10

16	2	12
6	10	14
8	18	4

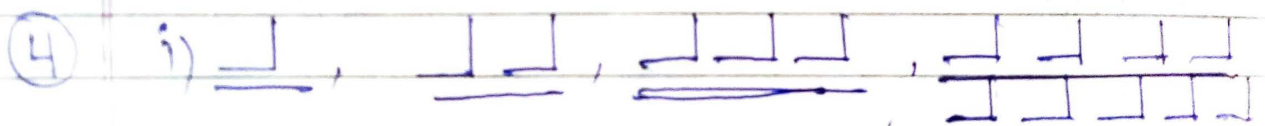
③ i) N = Number of figure
 S = Number of matchstick

N	1	2	3	4
S	7	10	13	16

i) $S = 3n + 4$ (S in term of N)

ii) 1) 15th figure = $N = 15$
 $S = (3 \times 15) + 4 = 49$ - Ans

2) 40th figure = $N = 40$
 $S = (3 \times 40) + 4 = 124$ - Ans



ii)

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

N = Number of figure
 L = Number of Matchstick

iii) $L = 2n$ (L in term of N)

iv) i) 12th figure = $N = 12$, $L = 2n = 12 \times 2 = 24$

ii) 20th figure = $N = 20$, $L = 2n = 2 \times 20 = 40$

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Ex - 5 - F

⑤ a)

N =	1	2	3
F =	5	8	11

N = Number of figure
F = Number of matchstick

i) $F = 3n + 2$

ii) 16th figure = $N = 16$
 $F = (3 \times 16) + 2 = \boxed{50 - \text{Ans}}$

30th figure = $N = 30$
 $F = (3 \times 30) + 2 = \boxed{92 - \text{Ans}}$

b)

N =	1	2	3
F =	5	9	13

i) $F = 4n + 1$

ii) 16th figure = $N = 16$
 $F = (4 \times 16) + 1 = 64 + 1 = \boxed{65 - \text{Ans}}$

30th figure = $N = 30$
 $F = (4 \times 30) + 1 = 120 + 1 = \boxed{121 - \text{Ans}}$

c)

N =	1	2	3
F =	8	13	18

i) $F = 5n + 3$

ii) 16th figure = $N = 16$, $F = (5 \times 16) + 3 = 80 + 3 = \boxed{83 - \text{Ans}}$

30th figure = $N = 30$

$$F = (5 \times 30) + 3 = 150 + 3 = \boxed{153}$$

d)

$N = 1$	2	3
$F = 6$	11	16

$$F = 5n + 1$$

16th figure = $N = 16$

$$F = (5 \times 16) + 1 = 80 + 1 = \boxed{81 - Ans}$$

30th figure = $N = 30$

$$F = (5 \times 30) + 1 = 150 + 1 = \boxed{151 - Ans}$$

e)

$N = 1$	2	3
$F = 5$	9	13

$$F = 4n + 1$$

16th figure = $N = 16$

$$F = (4 \times 16) + 1 = 64 + 1 = \boxed{65 - Ans}$$

30th figure = $N = 30$

$$F = (4 \times 30) + 1 = 120 + 1 = \boxed{121 - Ans}$$

f)

$N = 1$	2	3
$F = 2$	6	10

$$F = 4n - 1$$

16th figure = $N = 16$

$$F = (4 \times 16) - 1 = 64 - 1 = \boxed{63 - Ans}$$

30th figure = $N = 30$

$$F = (4 \times 30) - 1 = 120 - 1 = \boxed{119 - Ans}$$