

MATHEMATICS

Class-7th

Chapter-12

Algebraic
expressions

Exercise-12.4

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Mathematics




class - VII

Ch: 12.

Algebraic - Expression.

Ex - 12.4

Q. 1. Sol.

Symbol	Number of digits	Number of segments:
1. 	5	26
	10	51
	100	501
2. 	5	16
	10	31
	100	301
3. 	5	27
	10	52
	100	502

1. Sol.

(i) Equation is $5n + 1$.

Here, $n = 5$.

$$\Rightarrow 5n + 1 = 5 \times 5 + 1 \\ = 25 + 1 = 26. \checkmark$$

(ii) Here, $n = 10$

$$\Rightarrow 5n + 1 = 5 \times 10 + 1 \\ = 50 + 1 = 51. \checkmark$$

(iii) Here $n = 100$

$$\begin{aligned}\Rightarrow 5n + L &= 5 \times 100 + L \\ &= 500 + L \\ &= 501.\checkmark\end{aligned}$$

2. Sol. (i) Equation is $3n + 1$.

Here, $n = 5$.

$$\begin{aligned}\Rightarrow 3n + L &= 3 \times 5 + L \\ &= 15 + L = 16.\checkmark\end{aligned}$$

(ii) Here, $n = 10$.

$$\begin{aligned}\Rightarrow 3n + L &= 3 \times 10 + L \\ &= 30 + L \\ &= 31.\checkmark\end{aligned}$$

(iii) Here, $n = 100$

$$\begin{aligned}\Rightarrow 3n + L &= 3 \times 100 + L \\ &= 300 + L \\ &= 301.\checkmark\end{aligned}$$

3. Sol. Equation is $5n + 2$.

Here, $n = 5$

$$\Rightarrow 5n + 2 = 5 \times 5 + 2 = 27.\checkmark$$

(ii) Here, $n = 10$.

$$\begin{aligned}\Rightarrow 5n + 2 &= 5 \times 10 + 2 \\ &= 50 + 2 = 52. \checkmark\end{aligned}$$

(iii) Here, $n = 100$

$$\begin{aligned}\Rightarrow 5n + 2 &= 5 \times 100 + 2 \\ &= 500 + 2 \\ &= 502. \checkmark\end{aligned}$$

Q. 2. Sol.

(i) Equation is $2n - 1$.

Here, $n = 10$.

$$\begin{aligned}\Rightarrow 2n - 1 &= 2 \times 10 - 1 \\ &= 20 - 1 \\ &= 19. \checkmark\end{aligned}$$

(ii) $n = 100$.

$$\begin{aligned}\Rightarrow 2n - 1 &= 2 \times 100 - 1 \\ &= 200 - 1 = 199. \checkmark\end{aligned}$$

(iii) Equation is $n^2 + 1$.

Here, $n = 10$.

$$\begin{aligned}\Rightarrow n^2 + 1 &= 10^2 + 1 \\ &= 10 \times 10 + 1 \\ &= 100 + 1 = 101. \checkmark\end{aligned}$$