

26/6/2020
Friday

MATHEMATICS

STD - 8
class - 05

- Write many Arithmetic sequences and Find its n th term.

Ans) i) 11, 22, 33, ...

$$f = x_1 = 11$$

$$d = x_2 - x_1 = 22 - 11 = \underline{\underline{11}}$$

$$\begin{aligned}x_n &= f + (n-1)d \\ &= 11 + (n-1)11 \\ &= 11 + 11n - 11 \\ &= \underline{\underline{11n}}\end{aligned}$$

ii) 4, 18, 32, ...

$$x_1 = 4$$

$$d = 18 - 4 = \underline{\underline{14}}$$

$$\begin{aligned}x_n &= f + (n-1)d \\ &= 4 + (n-1)14 \\ &= 4 + 14n - 14 \\ &= \underline{\underline{14n - 10}}\end{aligned}$$

iii) 2, 4, 6, ...

$$x_1 = 2$$

$$d = 2$$

$$\begin{aligned}x_n &= f + (n-1)d \\ &= 2 + (n-1)2 \\ &= 2 + 2n - 2 \\ &= \underline{\underline{2n}}\end{aligned}$$



iv) 5, 7, 9, ...

$$x_1 = 5$$

$$d = 2$$

$$\begin{aligned}x_n &= f + (n-1)d \\ &= 5 + (n-1)2 \\ &= 5 + 2n - 2 \\ &= \underline{\underline{2n+3}}\end{aligned}$$

v) 4, 10, 16, ...

$$x_1 = 4$$

$$d = 6$$

$$\begin{aligned}x_n &= f + (n-1)d \\ &= 4 + (n-1)6 \\ &= 4 + 6n - 6 \\ &= \underline{\underline{6n-2}}\end{aligned}$$

vi) 7, 16, 25, ...

$$x_1 = 7$$

$$d = 16 - 7 = \underline{\underline{9}}$$

$$\begin{aligned}x_n &= f + (n-1)d \\ &= 7 + (n-1)9 \\ &= 7 + 9n - 9 \\ &= \underline{\underline{9n-2}}\end{aligned}$$

