



$$(iii) a_1 = -1, a_n = \frac{a_{n-1}}{n}, n \geq 2$$

Here, we are given that $n \geq 2$

So, the next five terms of this A.P would be a_2, a_3, a_4, a_5 and a_6

Now $a_1 = -1$ (1)

So, to find the a_2 term we use $n = 2$, we get,

$$a_2 = \frac{a_{2-1}}{2}$$

$$a_2 = \frac{a_1}{2}$$

$$a_2 = \frac{-1}{2} \text{ (Using 1)}$$

$$a_2 = \frac{-1}{2} \text{ (2)}$$

For a_3 , using $n = 3$, we get,

$$a_3 = \frac{a_{3-1}}{3}$$

$$a_3 = \frac{a_2}{3}$$

$$a_3 = \frac{\frac{-1}{2}}{3} \text{ (Using 2)}$$

$$a_3 = \frac{-1}{6} \text{ (3)}$$

For a_4 , using $n = 4$, we get,

$$a_4 = \frac{a_{4-1}}{4}$$

$$a_4 = \frac{a_3}{4}$$

$$a_4 = \frac{\frac{-1}{6}}{4} \text{ (Using 3)}$$

$$a_4 = \frac{-1}{24} \text{ (4)}$$

For a_5 , using $n = 5$, we get,

$$a_5 = \frac{a_{5-1}}{5}$$

$$a_5 = \frac{a_4}{5}$$

$$a_5 = \frac{-1}{24} \text{ (Using 4)}$$

$$a_5 = \frac{-1}{120} \dots\dots (5)$$

For a_6 , using $n = 6$, we get,

$$a_6 = \frac{a_{6-1}}{6}$$

$$a_6 = \frac{a_5}{6}$$

$$a_6 = \frac{-1}{120} \text{ (Using 5)}$$

$$a_6 = \frac{-1}{720}$$

Therefore, the next five terms, of the given A.P are

$$a_2 = \frac{-1}{2}, a_3 = \frac{-1}{6}, a_4 = \frac{-1}{24}, a_5 = \frac{-1}{120}, a_6 = \frac{-1}{720}$$

$$(iv) a_1 = 4, a_n = 4a_{n-1} + 3, n > 1$$

Here, we are given that $n > 1$.

So, the next five terms of this A.P would be a_2, a_3, a_4, a_5 and a_6

$$\text{Now } a_1 = 4 \dots\dots (1)$$

So, to find the a_2 term we use $n = 2$, we get,

$$a_2 = 4a_{2-1} + 3$$

$$a_2 = 4a_1 + 3$$

$$a_2 = 4(4) + 3 \text{ (Using 1)}$$

$$a_2 = 19 \dots\dots (2)$$

For a_3 , using $n = 3$, we get,

$$a_3 = 4a_{3-1} + 3 \text{ (Using 2)}$$

$$a_3 = 4a_2 + 3$$

$$a_3 = 4(19) + 3$$

$$a_3 = 79 \dots\dots (3)$$

For a_4 , using $n = 4$, we get,

$$a_3 = 4a_{3-1} + 3 \quad (\text{Using 2})$$

$$a_3 = 4a_2 + 3$$

$$a_3 = 4(19) + 3$$

$$a_3 = 79 \dots\dots (3)$$

For a_4 , using $n = 4$, we get,

$$a_4 = 4a_{4-1} + 3$$

$$a_4 = 4a_3 + 3$$

$$a_4 = 4(79) + 3 \quad (\text{Using 3})$$

$$a_4 = 319 \dots\dots (4)$$

For a_5 , using $n = 5$, we get,

$$a_5 = 4a_{5-1} + 3$$

$$a_5 = 4a_4 + 3$$

$$a_5 = 4(319) + 3 \quad (\text{Using 4})$$

$$a_5 = 1279 \dots\dots (5)$$

For a_6 , using $n = 6$, we get,

$$a_6 = 4a_{6-1} + 3$$

$$a_6 = 4a_5 + 3$$

$$a_6 = 4(1279) + 3 \quad (\text{Using 5})$$

$$a_6 = 5119$$

Therefore, the next five terms, of the given A.P are

$a_2 = 19, a_3 = 79, a_4 = 319, a_5 = 1279, a_6 = 5119$

***** END *****