

Arithmetic Progressions Ex 9.2 Q1 Answer:

In the given problem, we need to write the first term (a) and the common difference (d) of the given A.P

(i) -5, -1, 3, 7 ...

Here, first term of the given A.P is (a) = -5

Now, we will find the difference between the two terms of the given A.P

$$a_3 - a_1 = -1 - (-5)$$

$$a_2 - a_1 = 4$$

Similarly,

 $a_3 - a_2 = 3 - (-1)$

$$a_3 - a_2 = 4$$

$$a_4 - a_3 = 7 - 3$$
 Also,

$$a_4 - a_3 = 4$$

As
$$a_2 - a_1 = a_3 - a_2 = a_4 - a_3 = 4$$

Therefore, the first term of the given A.P is a = -5 and the common difference of the given is

d = 4

(ii)
$$\frac{1}{5}$$
, $\frac{3}{5}$, $\frac{5}{5}$, $\frac{7}{5}$,.....

Here, first term of the given A.P is (a) = $\frac{1}{5}$

Now, we will find the difference between the two terms of the given A.P.

$$a_2 - a_1 = \frac{3}{5} - \frac{1}{5}$$

$$a_2 - a_1 = \frac{2}{5}$$

$$a_3 - a_2 = \frac{5}{5} - \frac{3}{5}$$

$$a_3 - a_2 = \frac{2}{5}$$

$$a_4 - a_3 = \frac{7}{5} - \frac{5}{5}$$

$$a_4 - a_3 = \frac{2}{5}$$

As
$$a_2 - a_1 = a_3 - a_2 = a_4 - a_3 = \frac{2}{5}$$

Therefore, the first term of the given A.P is $a = \frac{1}{5}$ and the common difference is $d = \frac{2}{5}$

(iii) 0.3, 0.55, 0.80, 1.05, ...

Here, first term of the given A.P is (a) = 0.3

Now, we will find the difference between the two terms of the given A.P

$$a_2 - a_1 = 0.55 - 0.3$$

$$a_2 - a_1 = 0.25$$

Similarly,

$$a_3 - a_2 = 0.80 - 0.55$$

 $a_3 - a_2 = 0.25$

Also,

 $a_4 - a_3 = 1.05 - 0.80$

 $a_4 - a_3 = 0.25$

As
$$a_2 - a_1 = a_3 - a_2 = a_4 - a_3 = 0.25$$

Therefore, the first term of A.P is a = 0.3 and the common difference is d = 0.25

(iv) -1.1, -3.1, -5.1, -7.1...

Here, first term of the given A.P is (a) = -1.1

Now, we will find the difference between the two terms of the given A.P

$$a_2 - a_1 = -3.1 - (-1.1)$$

$$a_2 - a_1 = -2$$

Similarly,

$$a_3 - a_2 = -5.1 - (-3.1)$$

$$a_3 - a_2 = -2$$

Also,

$$a_4 - a_3 = -7.1 - (-5.1)$$

$$a_4 - a_3 = -2$$

As
$$a_2 - a_1 = a_3 - a_2 = a_4 - a_3 = -2$$

Therefore, the first term of A.P is a = -1.1 and the common difference is d = -2

********** END ********