ONLINE MATHS CLASS - X - 08 (05 / 07 /2021)

1.ARITHMETIC SEQUENCE- CLASS 6 – WORK SHEET -ANSWER

1. Compete the following table .

	Arithmetic sequence	Common diffrence	Algebraic form
Multiples of 7			
Add 3 to the multiples of 7			
Subtract 2 from the multiples of 7			

Answer

	Arithmetic sequence	Common difference	Algebraic form
Multiples of 7	**7 , 14 , 21 , . . .**	**7**	**7 n**
Add 3 to the multiples of 7	**10 , 17 , 24 , . . .**	**7**	**7 n + 3**
Subtract 2 from the multiples of 7	**5 , 12 , 19 , . . .**	**7**	**7 n - 2**

2. Compete the following table .

Arithmetic sequence	Common difference	Algebraic form
6 , 12 , 18 , . . .		
10 , 16 , 22 , . . .		
1 , 7 , 13 , . . .		

Answer

Arithmetic sequence	Common difference	Algebraic form
6 , 12 , 18 , . . .	**6**	**6 n**

10 , 16 , 22 , . . .	6	6 n + 4
1 , 7 , 13 , . . .	6	6 n - 5

3. Consider the sequence of natural numbers which leave a remainder 1 on division by 9 .

 a) Write down the sequence ?

 b) What is the common difference of this sequence ?

 c) What is the algebraic form of this sequence ?

Answer

 a) 1 , 10 , 19 , . . .

 b) **Common difference = 9**

 c) **Algebraic form = d n + f − d**   **f = 1**

$\qquad\qquad$ **= 9 x n + 1 − 9**   **d = 9**

$\qquad\qquad$ **= 9 n – 8**

4. Fifth term of an arithmetic sequence is 16 and its ninth term is 28 .

 a) What is the common difference of this sequence ?

 b) What is the first term of this sequence ?

 c) What is the algebraic form of this sequence ?

Answer

 a) $Common\ \ difference\ =\ \dfrac{Term\ \ difference}{Position\ \ difference}\ =\ \dfrac{x_9 - x_5}{9 - 5}\ =\ \dfrac{28 - 16}{4}\ =\ \dfrac{12}{4}\ =\ 3$

 b) **First term = Fifth term – 4 x Common difference**

$\qquad\qquad$ **= 16 – (4 x 3) = 16 – 12 =   4**

 c) **Algebraic form = d n + f − d**   **f = 4**

$\qquad\qquad$ **= 3 x n + 4 − 3**   **d = 3**

$\qquad\qquad$ **= 3 n + 1**