Chapter 5 Class 10 - Arithmetic Progressions - Assertion and Reasoning Worksheet 1 by teachoo

Chapter: Chapter 5 Class 10 Maths - Arithmetic Progressions

Name: _____

School: _____

Roll Number: _____

Instructions:

For each question, two statements are given: Assertion (A) and Reason (R). Choose the correct option.

(a) Both A and R are true, and R is the correct explanation of A.

(b) Both A and R are true, but R is not the correct explanation of A.

(c) A is true, but R is false.

(d) A is false, but R is true.

1. Assertion (A): The list of numbers 5,5,5,5, ... is an Arithmetic Progression.

Reason (R): A sequence is an AP if its terms continuously increase or decrease.

2. Assertion (A): The total fare for a journey of 15 km , where the fare is ₹20 for the first km and ₹ 8 for every additional km, is ₹132.

Reason (R): The fares for 1 km, 2 km, 3 km, ... form an AP with a $= 20$ and d $= 8$.

3. Assertion (A): The sum of the first ' n ' odd natural numbers is n^2.

Reason (R): The sum of the first n terms of an AP is given by $S_n = \frac{n}{2}[2a + (n-1)d]$.

4. Assertion (A): If the 5 th term of an AP is 10 and the 10 th term is 5 , then the 15 th term is 0 .

Reason (R): The nth term of an AP is given by $a_n = a + (n-1)d$.

5. Assertion (A): If the sum of ' n ' terms of a sequence is $3n^2 + 2n$, then the sequence is an AP.

Reason (R): The nth term of the sequence can be found by $a_n = S_n - S_{n-1}$. If a_n is a linear expression in ' n ', the sequence is an AP.

Important links

- Answer of this worksheet -https://www.teachoo.com/25624/5378/Assertion-Reasoning---Worksheet-1/category/Teachoo-Questions---Assertion-Reasoning/
- Full Chapter with Explanation, Activity, Worksheets and more – https://www.teachoo.com/subjects/cbse-maths/class-10th/ch5-10th-arithmetic-progressions/
- Science Class 10– https://www.teachoo.com/subjects/science/class-10/
- Maths Class 10- https://www.teachoo.com/subjects/cbse-maths/class-10th/

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