**Arithmetic Sequence**

An **arithmetic sequence** is a sequence where every term after the first term is obtained by adding a constant called the **common difference**.

It a sequence where the difference between any two consecutive terms is constant.

Examples of Arithmetic Sequence

1, 4, 7, 10,… 15, 11, 7, 3,…

Remember:

The nth term of an arithmetic sequence is defined as

where a1 = the first term

an = the nth term

d = the common difference

Illustrative examples

A. Determine whether the sequence is arithmetic. If it is, give the common difference.

a. -3, 2, 7, 12,… b. 4, 8, 16, 32,…

B. Find the 14th term of the arithmetic sequence 5, 7, 9, 11,…

C. In the arithmetic sequence -7, -4, -1, 2,…, what term is 44?

D. If a1 = 5 and a7 = 17, find the common difference.

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