ARITHMETIC PROGRESSIONS

An **arithmetic progression** (AP) is a list of numbers in which each term is obtained by adding a fixed number d to the preceding term, except the first term. The fixed number d is called the **common difference**

For examples :

1) 1,2,3,4,5, ... $\quad d = 2 - 1 = 1$

2) 1,5,9,13,17, ... $\quad d = 5 - 1 = 4$

3) 10,7,4,1, -2, ... $\quad d = 7 - 10 = -3$

4) 8,4,0, -4. -8, -12, ... $\quad d = 4 - 8 = -4$

5) 3,3,3,3,3 ... ... $\quad d = 3 - 3 = 0$

For an AP ,if the common difference is :

- **Positive** ,the AP is
- **Zero** , the AP is
- **Negative** the AP is

For the following APs, write the common difference:

1) $1, 4, 7, 10, \ldots \ldots \ldots$ $\quad d =$

2) $2, 6, 10, 14, \ldots \ldots \ldots$ $\quad d =$

3) $10, 8, 6, 4, \ldots \ldots \ldots$ $\quad d =$

4) $3, 1, -1, -3, \ldots \ldots \ldots$ $\quad d =$

5) $5, 5, 5, 5, \ldots \ldots \ldots$ $\quad d =$

6) $1, 1.5, 2, 2.5, \ldots \ldots \ldots$ $\quad d =$

7) $0.6, 1.7, 2.8, 3.9, \ldots \ldots \ldots$ $\quad d =$

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