-to be able to analyze a set of data for the existence of a pattern by completing a table or sequence

Identifying Patterns of the sequence to find the next three terms.

Example 1

-15, -8, -1, 6, 13,...........

   +7   +7 +7 +7

So add 7 is the constant difference

Then, 13+7=20

20+7 = 27

And 27 + 7= 34 which means the next three terms are 20,27, 34

Example 2

x	5	6	7	8	9	10	11
y	12	17	22	27	?	?	?

        +5   +5   +5

So first find the constant difference of the y terms:

Constant difference is +5

So then 32,37, and 42 would be the next three terms.

Complete each table.

1.

Number	2	4	6	8	10	12	14	16
Pattern	12	24	36	48				

2.

Number	1	2	3	4	5	6	7	8
Pattern	2	23	58	107	170			

Find the next three terms in each sequence using constant differences. Show your work.

3. 5,8,12,17,23,……..

4. 5,13,21,29,37,…….

5. 38,29,21,14,………

6. 23,22,20,17,13,…….

7. 8,16,24,32,40,……..

8. 100,97,94,91,88,……..

9. 30,31,35,42,52,……

10. 1,4,9,16,25,…….

11. 12,0,-12,-24,-36,…….

12. -3,-8,-13, -18,-23,……….