Check your prior knowledge:

Write the nth term of:

1)4, 9, 14, 19, 24,…

2) 3,9,17,27,39,……

**Investigation into Cubic Sequences**

We have learned to identify the nth term of a quadratic sequence by finding out the link between the second difference of a quadratic sequence and the nth term of that sequence.

Can you discover the rules of **cubic sequences**?

Use the **cubic sequences** below to investigate. You should be able to recognise the sequences and write the nth term rule.

1. 2, 16, 54, 128, 250….
2. 3, 24, 81, 192, 375….
3. 9, 16, 35, 72, 133….

Based on your observations, answer the following questions.

Q1. For quadratic sequence 2nd difference will be same. So **for cubic sequence**, which difference do you think would be same?

Ans)…………………..

Q2. Nth term of a quadratic sequence is an expression 2nd order (n2 ). What do you think will be the order of **cubic sequence**?

Ans)…………………

Q3. Can you write the nth term for above sequences? If yes, write the nth term of sequence (a), show your method.

Ans)