

Sequences



i. For each of the number sequences below, calculate the next two numbers that will appear in the sequence

- 2, 4, 6, 8
- 2, 5, 8, 11
- 1, 4, 9, 16
- 7, 4, 1, -2
- 48, 46, 44, 42
- $1, \frac{1}{2}, \frac{1}{3}, \frac{1}{4}$
- 99, 198, 297, 296
- 17, 21, 25, 29
- 1, 9, 17, 25, 33
- 2, 4, 8, 16, 32

If you found the answers to all the above, have a go at these slightly trickier ones!

- 5, 20, 45, 80
- 656, 328, 164, 82
- -1, -8, -27, -64
- 1, 1, 2, 3, 5, 8

ii. For each of the following n^{th} terms, write out the first 5 terms of the sequence

- $4n + 5$
- $n^2 + 4$
- $\frac{2000}{2n}$
- $2n^2$
- $100 - n^2$
- $n^3 - 2n$
- $3n - n^2$