

Arithmetic Series

Series

The sum of the terms of a sequence.

Partial Sum

The sum, S_n , of the first n terms of a sequence.

The Formulae

$$S_n = \frac{n[2a + (n - 1)d]}{2}$$

$$S_n = \frac{n(t_1 + t_n)}{2}$$

1. In an amphitheatre, seats are arranged in 50 semicircular rows. The first row contains 23 seats, and each row contains 4 more seats than the previous row. How many seats are in the theatre?

2. Determine the sum of $-31, -35, -39, \dots -403$