

What are the next three terms in these sequences (or pattern): 2, 5, 8, 11, _____, _____, _____

90, 85, 80, 75, _____, _____, _____

Explain the patterns in words.

Create your own arithmetic sequence with at least 4 terms. Ask your neighbor if he/she can determine the next number in the sequence.

An arithmetic series is just finding a sum of an arithmetic sequence. For example,

$$1 + 2 + 3 + 4 + \dots + 9 + 10 = ? \quad \text{or} \quad 2 + 5 + 8 + \dots + 20 + 23 = ?$$

You can add all of these up one by one or with a calculator, but can you find a more efficient strategy?

HOMEWORK: Calculate $1 + 2 + 3 + \dots + 98 + 99 + 100$. Find at least one strategy that makes this calculation easier. You may find it helpful to start with a smaller series such as $1 + 2 + 3 + 4 + \dots + 9 + 10$ first.