

Arithmetic Series

CKSTEM Math Problem Solving · Grades 4–7

Try each problem on your own first — then watch the solution videos.

★ Spot the Step

A list of numbers begins 2, 5, 8, 11, ... If the same rule keeps going, what is the next number, and how big is the step from one number to the next?

WORK IT OUT HERE

LO Constant Step

Maya walks across a pond on 8 stepping stones. Each stone is heavier than the one before by the same amount. The first stone is 5 kilograms, the second is 8 kilograms, and the third is 11 kilograms. How heavy is the 8th stepping stone?

WORK IT OUT HERE

L1 Far-Term Formula

Aiden walks down a street. The house numbers form a pattern: 7, 13, 19, 25, 31, and so on. What number is on the 20th house?

WORK IT OUT HERE

L2 Gauss Pairing

Maya stacks blocks in a 12-row staircase tower. Row 1 has 4 blocks, and each row above has 3 more blocks than the one below. How many blocks are in the whole tower?

WORK IT OUT HERE

L3 Count by Step

A pet shelter assigns ID tags in multiples of four. The numbers run from 100 up to 196. How many ID tags does the shelter give out in total?

WORK IT OUT HERE

L4 Sum a Slice

Carlos reads chapters every weekend. Weekend 1 he reads 5 chapters, weekend 2 he reads 8, weekend 3 he reads 11, and the pattern keeps adding 3 chapters each weekend. How many chapters does he read across weekends 5 through 12?

WORK IT OUT HERE

L5 Subtract Two Series

Two choirs share a 60-minute concert. Choir A sings on the odd minutes (1, 3, 5, ...) and Choir B sings on the even minutes (2, 4, 6, ...). On each minute, the singing choir claps that many times. How many more total claps does Choir B do than Choir A?

WORK IT OUT HERE