

Gauss Technique

CKSTEM Math Problem Solving · Grades 4–7

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

L0 Pair-and-Equalise (even n)

A helper is decorating thank-you cards for newcomer families. The first card gets 1 sticker. The second card gets 2 stickers. And so on, all the way to 8 stickers on the eighth card. How many stickers does the helper use in all?

WORK IT OUT HERE

L1 Pair-and-Equalise (general step)

Volunteers are stacking cans at a food drive for newcomer families. Six rows hold 7, 9, 11, 13, 15, and 17 cans. How many cans are there altogether?

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L2 Gauss Pairing (odd n)

An animal rescue shelter has seven shelves of folded towels. The shelves hold 11, 14, 17, 20, 23, 26, and 29 towels. How many towels in all?

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L3 Recover n First

A neighbourhood support group packs lunch bags for kids in need. On the first day they pack 14 bags. Each day after that, they pack 3 more bags than the day before. On the last day they pack 47 bags. How many lunch bags do they pack in total?

WORK IT OUT HERE

L4 Slice = Big Sum – Small Sum

In an encouragement-card campaign, volunteers send cards every day. Day 1: 1 card. Day 2: 2 cards. And so on, k cards on day k . How many cards do they send from day 38 through day 60?

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L5 Repeating Block Invariant

A community pantry tracks its daily net change in supply boxes. Three restocking days the pantry gains 1, 3, and 5 boxes. The next three days it gives out 7, 9, and 11. Then it gains 13, 15, and 17. Then it loses 19, 21, and 23. The pattern continues. What is the pantry's net change after the first 60 days?

WORK IT OUT HERE