

Mathematical Equations — Strategy & Tricks

Four unknowns, four equations, six candidates, seventy-five seconds. Pin one value and let the rest fall — or skip the solving and let the equations kill the options for you.

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What the item actually asks

Every item hands you a tiny system: four equations, four unknowns called A, B, C and D, and six candidate assignments underneath. Exactly one satisfies all four. Nothing says you have to *solve* the system to find it.

The numbers are friendly on purpose: whole numbers, mostly 1 to 20, joined by +, -, × and ÷. No calculator, and nothing here is harder than adding two-digit numbers.

$$C = 2$$

$$B + C = 8$$

$$A = B - 1$$

$$D + A = 15$$

One line hands you $C = 2$; each of the others is then left with a single unknown: $B = 6$, $A = 7$, $D = 8$. The answer reads $A=7$, $B=6$, $C=2$, $D=8$.

The rules in one breath Around 20 items in around 25 minutes — roughly 75 seconds each. Six options, exactly one correct. No negative marking, so the only way to score zero on an item is to leave it blank.

Two consequences. The candidates are printed, so *checking* one often beats *solving* for it. And a wrong answer costs nothing, so never leave a blank. This is not an algebra test — it is a test of reading a minus sign under pressure.

Read the shape before the numbers

Spend five seconds on the *shape* of the four lines, not their values. Each variant has a best first move, and naming it turns a 90-second slog into a 40-second routine.

If you see	It is	Do this first
A letter and a number: $C = 2$.	Direct value	Pin it; find the line with one unknown left.
Links off one letter: $3 \times B = C$, $D - 3 = 2 \times B$.	Hub chain	Write every letter in terms of the hub.
Two-letter sums: $A + B = 13$, $B + C = 11$, $A + C = 10$.	Pair sums	Add all three — that is twice the total.
A long line with all four letters, plus short links.	Combined + links	Links first. The long line judges.

If you see	It is	Do this first
A line that is two others combined.	Redundant fourth	Ignore it. It cannot fail.

The five-second scan Look for four things only: a single-letter line, the shortest line, any $-$, any $\times$ or $\div$. Compute nothing yet — computing before you find the anchor is how you end up wrestling the long line for nothing.

Early items may use only two or three unknowns. Same game, fewer pieces — pin, propagate, done. Bank the seconds; the four-letter items will want them.

Two routes: pin-and-propagate, or test-and-kill

Two ways to finish an item, and good solvers switch mid-item. **Solve** it: pin one value and propagate. **Test** it: push each printed candidate through an equation and see which survive. The exam scores the letter, not the route.

Route one — the anchor method. For a direct value or a short chain.

1. Find the anchor: the line with fewest unknowns. A direct value ($B = 5$) is best, a one-link line ($C = 2 \times B$) next.
2. Pin it and say it: *B is five*.
3. **Substitute**: find the line where only one letter is now unknown; solve that one-liner.
4. Repeat until all four are pinned. Each step is one addition, subtraction or small multiplication.
5. Verify with the line you have not used — usually the long one — then find your assignment.

$$D = 4$$

$$A - D = 3$$

$$C = A - 2$$

$$B + C = 16$$

Mini-example. Anchor $D = 4$, then $A = 7$, $C = 9$, $B = 7$. Four one-liners, no algebra, 25 seconds.

No anchor? **Eliminate** a letter instead: combine two lines so it cancels. The pair-sum trick is exactly that — $A + B = 13$, $B + C = 11$, $A + C = 10$ add to 34, twice the total, so $A + B + C = 17$ and each letter is 17 minus the pair that excludes it: $C = 4$, $A = 6$, $B = 7$.

Route two — option elimination. Six options and four equations is not 24 checks. Run all six through the *easiest* equation, cross out the failures, then run only the survivors through the next. Most items settle after two.

1. Pick the easiest equation: a direct value first ($C = 4$ kills every option whose C is not 4 at a glance), then a one-link line, then a two-letter sum.
2. Run all six down it, reading only the letters involved. If all six agree on a letter, it is free — never spend an equation on it.
3. Take the next-easiest equation; run only the survivors through it.
4. One option left means done. Do not check the rest — that is the time saving.
5. Two still standing? The line you skipped separates them.

Equation	Cost per option	Why
$C = 4$	under 1 s	One digit; kills two or three options.
$3 \times B = C, B \div 4 = A$	1–2 s	One multiplication; parity halves the work.

Equation	Cost per option	Why
$B + C = 11, D - C = 5$	2–3 s	One addition or subtraction.
$A - B + C - D = 6$	5 s+	Four reads, three operations, easy to slip.

Solve or test? Solve when there is a direct value, or a chain that hands you one letter after another. Test when there is no anchor, when several options are consistent chains, or when they differ in one letter. Past 60 seconds, stop solving and start testing — elimination always finishes.

Reading signs and doing sums in your head

Double negatives. The writers love $A = B - -1$. Read it as *B minus negative one* — that is *B plus one*. $D - -3$ is $D + 3$; $C - -5 = 12$ means $C = 7$. Train your eye until $- -$ reads as $+$ with no conscious step in between.

Leading minus. $- A + B = 3$ is $B - A = 3$; B is bigger. **Tails.** $2 \times C - 1 = B$ means double C then drop one; $13 - C = A$ means A and C add to 13. **Division.** $B \div 4 = A$ says B is four times A — the letter beside the $\div$ is the big one. Never flip it.

- **Parity.** $A + B = 13$ is odd, so A and B differ in parity — two odds or two evens die without adding.
- **Odd by construction.** $2 \times C - 1 = B$ forces B odd. An even B is dead on sight.
- **Multiples.** $3 \times B = C$ makes C one of 3, 6, 9, 12, 15, 18; $B \div 4 = A$ makes B a multiple of 4.
- **Group the signs.** In $A - B + C - D = 6$, add the pluses ($A + C$) and the minuses ($B + D$); the difference must be 6.
- **Count up.** To take 7 from 15, think *7 and what makes 15*? Counting up slips less.

The sentence trick Say every equation you use once, as a sentence: *A is one more than B; D is twice B, plus three*. One second spent, sixty saved.

The 75-second routine

Seventy-five seconds is generous until you spend twenty staring at the wrong line. The routine below doubles as your scanning order: shortest line first, long line last.

Seconds	Do	Never
0–5	Scan shapes. Find the direct value or shortest line. Spot any $- -$.	Read the options. Touch the long line.
5–20	Pin the anchor. Strike every option that disagrees.	Recompute it to be sure.
20–45	Propagate a link, or run survivors through the next equation.	Keep going once one option is left.
45–60	Take the survivor. If two survive, test the skipped line on both.	Re-derive because the answer looks odd.
60–75	Buffer. Bank it for the hard item later.	Start a fresh method.

Ninety seconds is the ceiling Past 90 seconds on one item you are stealing from three later ones. Take the best survivor and move. A guess costs nothing; a blank costs a point.

Where the points leak

The arithmetic is easy, so the errors are not arithmetic errors. They are reading errors and stopping errors — and the options reward every one.

- **Misreading a minus.** $A = B - -1$ read as $A = B - 1$ lands two out — and that value is printed in the options. Plug: rewrite $- -$ as $+$ before computing.
- **The option that fits three equations.** A decoy is the right answer with one letter changed, so it passes every line that skips that letter. Plug: if two survive, test the skipped line on both. An equation passes options; only the last survivor is the answer.
- **The redundant line.** $A + C = 15$, when you already have $A + B = 12$ and $C - B = 3$, cannot fail — so it separates nothing. Plug: move to the letter the options disagree on.
- **Swapped letters.** $A=6, B=7$ and $A=7, B=6$ both pass $A + B = 13$. Plug: after a sum, test a difference or a link.
- **Division direction.** $B \div 3 = A$ makes B the multiple of 3, not A . Plug: say B is *three* A .

$$A + B = 13$$

$$B + C = 11$$

$$C + D = 10$$

$$A + D = 12$$

Four lines, three facts: the last is line one minus line two plus line three, so it cannot fail. This system cannot be solved outright — only the options can finish it.

Your answer is not among the options Ninety-nine times in a hundred you misread a sign. Re-read the line with the $- -$ or the leading minus — that line only — and fix the one value. Do not restart the item.

Worked examples, easy to hard

Six items in the exam's own style. Cover the options, try each, then read on.

Easy 1 — a direct value and a clean chain EASY · target 35s

Which option satisfies all four?

$$B = 6$$

$$A - B = 3$$

$$C = A + B$$

$$D + B = 10$$

- A. $A=3, B=6, C=9, D=4$
- B. $A=9, B=6, C=15, D=16$
- C. $A=9, B=6, C=15, D=4$
- D. $A=9, B=6, C=3, D=4$
- E. $A=9, B=5, C=14, D=5$
- F. $A=9, B=6, C=15, D=6$

Steps

1. Direct value: $B = 6$, so option E ($B = 5$) dies before any arithmetic.
2. $A - 6 = 3$, so $A = 9$ — option A subtracted the wrong way. $C = 15$ kills D; $D = 4$ kills B and F.
3. C stands alone, and you verified nothing: each line killed one decoy.

Answer: C — $A=9, B=6, C=15, D=4$

Easy 2 — a leading minus and a double negative EASY · target 40s

Which option satisfies all four?

$$C = 4$$

$$- C + D = 5$$

$$A = D - -2$$

$$B + C = A$$

- A. $A=11, B=7, C=4, D=9$
- B. $A=7, B=3, C=4, D=9$
- C. $A=11, B=7, C=4, D=1$
- D. $A=11, B=15, C=4, D=9$
- E. $A=11, B=7, C=5, D=9$
- F. $A=12, B=8, C=4, D=10$

Steps

1. Direct value: $C = 4$, so option E ($C = 5$) dies on sight.
2. Leading minus: $- C + D = 5$ is $D - 4 = 5$, so $D = 9$; options C ($D = 1$) and F ($D = 10$) die.
3. Double negative: $A = D + 2 = 11$. Option B read $- -2$ as $- 2$ and got 7 — the whole trap. Then $B = 11 - 4 = 7$; option D added and got 15. Only A survives.

Answer: A — $A=11, B=7, C=4, D=9$

Medium 1 — three pair sums and a difference MEDIUM · target 55s

Which option satisfies all four?

$$A + B = 13$$

$$B + C = 11$$

$$A + C = 10$$

$$D - C = 5$$

A. $A=7, B=6, C=4, D=9$

B. $A=6, B=7, C=4, D=1$

C. $A=5, B=8, C=3, D=8$

D. $A=6, B=7, C=4, D=9$

E. $A=6, B=7, C=5, D=10$

F. $A=6, B=8, C=4, D=9$

Steps

1. Three two-letter sums and one difference: the pair-sum variant. Solve, do not test.
2. $13 + 11 + 10 = 34$, so $A + B + C = 17$. Peel: $C = 4$, $A = 6$, $B = 7$, then $D = C + 5 = 9$. Option D.
3. Testing is slower: $D - C = 5$ kills only B, $A + B = 13$ only F, and all four lines are needed to split C from D. A and D are the swap trap — $B + C = 11$ tells them apart.

Answer: D — $A=6, B=7, C=4, D=9$

Medium 2 — a division link and a parity kill MEDIUM · target 60s

Which option satisfies all four?

$$B \div 4 = A$$

$$C - B = A$$

$$D = 2 \times C - 1$$

$$A + B = 10$$

A. $A=2, B=8, C=10, D=20$

B. $A=4, B=6, C=10, D=19$

C. $A=2, B=6, C=8, D=15$

D. $A=8, B=2, C=10, D=19$

E. $A=2, B=8, C=10, D=19$

F. $A=2, B=8, C=6, D=11$

Steps

1. Line one is a division link: B is four times A, so a multiple of 4. Options B (6), C (6) and D (2) die. Three left: A, E, F.
2. Line three forces D odd — twice something, minus one — so option A ($D = 20$) dies with no multiplication. Line two, $C - B = A$: E gives $10 - 8 = 2$; F gives $6 - 8$, negative. Answer E.
3. Solving is as quick: $B = 4A$ and $A + B = 10$ give $5A = 10$, so $A = 2$, $B = 8$, $C = 10$, $D = 19$.

Answer: E — $A=2, B=8, C=10, D=19$

Hard 1 — a long line with links off one hub HARD · target 75s

Which option satisfies all four?

$$A - B + C - D = 6$$

$$3 \times B = C$$

$$D - 3 = 2 \times B$$

$$A = 4 \times B - -1$$

A. $A=13, B=3, C=9, D=9$

B. $A=9, B=2, C=6, D=1$

C. $A=9, B=2, C=6, D=7$

D. $A=7, B=2, C=6, D=7$

E. $A=5, B=1, C=3, D=5$

F. $A=9, B=3, C=6, D=7$

Steps

1. One long line, three links, all off B. Options A, C and E are complete consistent chains for $B = 3, 2$ and 1, so the links alone cannot finish it.
2. Cheap kills: $3 \times B = C$ kills F; $A = 4 \times B - -1$ is $4B + 1$ and kills D; $D - 3 = 2 \times B$ kills B. The long line on the survivors: A gives 10, E gives 2, C gives $9 - 2 + 6 - 7 = 6$.
3. Faster still: $A = 4B + 1, C = 3B, D = 2B + 3$ turn the long line into $4B - 2 = 6$, so $B = 2$. Consistent chains among the options mean the item was built to be solved.

Answer: C — $A=9, B=2, C=6, D=7$

Hard 2 — the redundant line HARD · target 80s

Which option satisfies all four?

$$A + B = 12$$

$$C - B = 3$$

$$A + C = 15$$

$$D = 2 \times A - C$$

A. $A=8, B=4, C=7, D=2$

B. $A=9, B=3, C=6, D=11$

C. $A=8, B=4, C=6, D=10$

D. $A=7, B=5, C=8, D=7$

E. $A=8, B=5, C=8, D=8$

F. $A=8, B=4, C=7, D=9$

Steps

1. Line three is line one plus line two: $(A + B) + (C - B) = A + C$, and $12 + 3 = 15$. Redundant — it passes anything that passes the first two, and pins nothing.
2. So a family fits: $A = 12 - B, C = B + 3, D = 21 - 3B$. Four options belong to it; three carry a wrong D, and the fourth is the answer. Only the D line separates them.
3. Test $D = 2 \times A - C$ first: A gives 9 not 2, B gives 12 not 11, D gives 6 not 7. Then $C - B = 3$ kills C and $A + B = 12$ kills E. F remains — spotting the redundancy at second five was the item.

Answer: F — $A=8, B=4, C=7, D=9$

Recognition drills

Two drills that train the scan, not the sums. Answer out loud before reading the solution.

Spot the anchor

Twenty seconds an item. Name the variant, point at the anchor, say the first value.

1. Where do you start? (20s)

$$A + B + C - D = 10$$

$$B = 3$$

$$C = 4 \times B$$

$$D = C - B$$

Answer: Line two, $B = 3$. Then $C = 12$, $D = 9$, and the long line has one unknown left: $A = 4$.

2. Where do you start? (20s)

$$A \div 2 = C$$

$$A + C = 12$$

$$B - A = 5$$

$$D = B - -2$$

Answer: No direct value; lines one and two share only A and C . $A = 2C$, so $3C = 12$: $C = 4$, $A = 8$, then $B = 13$, $D = 15$.

3. Where do you start? (20s)

$$D = 7$$

$$A - D = 4$$

$$B + A = 20$$

$$C = B \div 3$$

Answer: Line one, $D = 7$. Then $A = 11$, $B = 9$, $C = 3$.

4. Where do you start? (20s)

$$A + B = 15$$

$$B + C = 12$$

$$A + C = 13$$

$$D - A = 2$$

Answer: Pair sums: $15 + 12 + 13 = 40$, so $A + B + C = 20$. $C = 5$, $A = 8$, $B = 7$, then $D = 10$.

5. Where do you start? (20s)

$$2 \times B - 1 = A$$

$$C = B + A$$

$$D - C = B$$

$$B = 4$$

Answer: Line four — the anchor hides at the bottom. $B = 4$, so $A = 7$, $C = 11$, $D = 15$.

6. Where do you start? (20s)

$$A - B + C - D = 7$$

$$A = 3 \times B$$

$$C = B - -5$$

$$D = 2 \times B + 1$$

Answer: Hub: nothing pins B. In B the long line is $3B - B + (B + 5) - (2B + 1) = B + 4 = 7$, so $B = 3$, $A = 9$, $C = 8$, $D = 7$.

Kill the options

One equation, six candidates, fifteen seconds. Say which survive.

1. (1) $B=4$, $C=7$ (2) $B=5$, $C=5$ (3) $B=6$, $C=5$ (4) $B=3$, $C=8$ (5) $B=7$, $C=4$ (6) $B=2$, $C=8$. (15s)

$$B + C = 11$$

Answer: (1), (3), (4), (5). (2) and (6) make 10 — and 11 is odd, so two odds or two evens die on parity.

2. (1) $A=9$, $B=6$ (2) $A=3$, $B=6$ (3) $A=10$, $B=7$ (4) $A=6$, $B=9$ (5) $A=5$, $B=2$ (6) $A=8$, $B=5$. (15s)

$$A = B - 3$$

Answer: It reads $A = B + 3$: (1), (3), (5), (6). (2) read $- 3$ as $- 3$; (4) has the letters swapped.

3. (1) $B=2$, $C=6$ (2) $B=3$, $C=6$ (3) $B=4$, $C=12$ (4) $B=6$, $C=2$ (5) $B=5$, $C=15$ (6) $B=1$, $C=4$. (15s)

$$3 \times B = C$$

Answer: (1), (3), (5). (4) multiplied the wrong letter — C is the big one.

4. (1) $A=3$, $D=8$ (2) $A=8$, $D=3$ (3) $A=5$, $D=10$ (4) $A=10$, $D=5$ (5) $A=1$, $D=6$ (6) $A=4$, $D=8$. (15s)

$$- A + D = 5$$

Answer: Read it as $D - A = 5$: (1), (3), (5). (2) and (4) run the difference backwards; (6) is off by one.

5. (1) $C=4$, $D=7$ (2) $C=4$, $D=8$ (3) $C=6$, $D=11$ (4) $C=5$, $D=9$ (5) $C=3$, $D=7$ (6) $C=10$, $D=19$. (15s)

$$D = 2 \times C - 1$$

Answer: (1), (3), (4), (6). D must be odd, so (2) dies on parity; (5) added the one instead of subtracting.

6. (1) $A=9$, $B=2$, $C=6$, $D=7$ (2) $A=7$, $B=2$, $C=6$, $D=7$ (3) $A=10$, $B=3$, $C=5$, $D=6$ (4) $A=8$, $B=1$, $C=4$, $D=5$ (5) $A=12$, $B=4$, $C=3$, $D=5$ (6) $A=6$, $B=6$, $C=6$, $D=6$. (20s)

$$A - B + C - D = 6$$

Answer: Group the signs: $(A + C) - (B + D) = 6$. (1), (3), (4) and (5) survive; (2) gives 4, (6) gives 0. Four survivors — the long line is a poor first filter, a fine last one.

Guided practice: talk yourself through one

Cover the walkthrough and try this one first. Then read the self-talk of a well-drilled candidate, and copy the rhythm.

$$D = 5$$

$$A - D = 6$$

$$C = A - 3$$

$$B + C = 20$$

Options: (1) $A=11$, $B=6$, $C=14$, $D=5$ (2) $A=11$, $B=6$, $C=8$, $D=5$ (3) $A=1$, $B=6$, $C=14$, $D=5$ (4) $A=11$, $B=12$, $C=8$, $D=5$ (5) $A=11$, $B=6$, $C=14$, $D=6$ (6) $A=11$, $B=4$, $C=14$, $D=5$.

1. 0–5 s. Line one is a direct value, D is five. Line three has a $-$, so that is a plus. Direct-value chain — solve, do not test.

2. 5–15 s. D = 5, so (5) is dead. A minus five is six, A is eleven — (3) is dead.
3. 15–30 s. C is A plus three, fourteen. (2) and (4) both have C = 8, the double-negative misread.
4. 30–40 s. B plus fourteen is twenty, B is six. That is (1); (6) has B = 4. Nothing checked twice, and the only line said out loud was the one with the - - — which is exactly where the two dead options came from.

Build up: easy, medium, hard

Work the three tiers in order, untimed. The goal is not a score — it is that the variant name arrives before you compute. Move up at 7 of 8, and only when you can say why each wrong option was wrong.

Tier	What it drills	Move up when
Easy	Direct values, short chains, single sign reads.	Under 35 seconds, no sign errors.
Medium	Pair sums, $\times$ and $\div$ links, choosing the first line.	You pick that line without deliberating.
Hard	Long lines, hub letters, redundant equations, decoys.	You spot a redundant line inside five seconds.

Live drill online: Easy set — direct values and short chains —

<https://dmatprepguide.com/?try=drill&cat;=math&tier;=easy&n;=8&timed;=0>

Live drill online: Medium set — pair sums and $\times$ $\div$ links —

<https://dmatprepguide.com/?try=drill&cat;=math&tier;=medium&n;=8&timed;=0>

Live drill online: Hard set — long lines, hubs, redundant equations —

<https://dmatprepguide.com/?try=drill&cat;=math&tier;=hard&n;=8&timed;=0>

Between tiers, re-read the traps: the decoys one tier up are built from those misreads.

Against the clock

Now the clock. Speed comes from the scan being automatic, not from adding faster. Time each item and note *where* the seconds went: scan, anchor, propagate or pick. Seconds saved on an easy item are for the hard item at the end.

Shape	Target	If you are over
Direct value + chain	30 s	Slow scan — you computed before finding the anchor.
Pair sums, $\times$ and $\div$ links	50 s	You chose the wrong first equation.
Long line + hub links	75 s	You hit the long line too early. Links first.

Timed solve

No options — solve outright and say all four values inside the time.

1. Solve the system. (45s)

$$A = 6$$

$$B - A = 5$$

$$C = A + B$$

$$D = C - -2$$

Answer: A=6, B=11, C=17, D=19. A direct-value chain: four one-liners.

2. Solve the system. (60s)

$$\begin{aligned}B \div 2 &= A \\A + B &= 15 \\C - B &= A \\D &= C - 4\end{aligned}$$

Answer: A=5, B=10, C=15, D=11. $B = 2A$, so $3A = 15$.

3. Solve the system. (60s)

$$\begin{aligned}A + B &= 10 \\B + C &= 14 \\A + C &= 12 \\D &= 3 \times A\end{aligned}$$

Answer: A=4, B=6, C=8, D=12. Pair sums add to 36, total 18.

4. Solve the system. (60s)

$$\begin{aligned}A - B + C - D &= 9 \\B &= 2 \\C &= 5 \times B \\D &= 2 \times B + 1\end{aligned}$$

Answer: A=6, B=2, C=10, D=5. Pin B, get C and D, then the long line has one unknown left.

5. Solve the system. (50s)

$$\begin{aligned}C &= 3 \\-C + D &= 6 \\A &= D - -4 \\B + C &= A\end{aligned}$$

Answer: A=13, B=10, C=3, D=9. A leading minus, then a double negative.

6. Solve the system. (75s)

$$\begin{aligned}A + B + C + D &= 34 \\A &= 2 \times B \\C &= B - -1 \\D &= 3 \times B - 2\end{aligned}$$

Answer: A=10, B=5, C=6, D=13. Hub is B: $2B + B + (B + 1) + (3B - 2) = 7B - 1 = 34$.

Live drill online: Medium set — 60 seconds each —

<https://dmatprepguide.com/?try=drill&cat;=math&tier;=medium&n;=8&timed;=1>

Live drill online: Hard set — 75 seconds each —

<https://dmatprepguide.com/?try=drill&cat;=math&tier;=hard&n;=8&timed;=1>

Exam day

The set opens with lighter shapes and thickens: move fast early, reach the four-letter items with time in hand, never let one item eat three.

■ Scan all four lines for shape before touching a number.

- Pin the direct value or shortest line; strike every option that disagrees.
- Rewrite every - - as + the moment you see it.
- Say each equation you use as a sentence, once.
- Easiest equation on all six; next-easiest on survivors only.
- Stop when one option remains. Do not confirm for fun.
- Two survivors? Test the skipped line on those two.
- A line that passes everything is redundant — move on.
- Answer not in the options? Re-read the line with the sign.
- Ninety seconds is the ceiling: take the best survivor and move.
- Never leave an item blank; there is no negative marking.

Clock checks: at 75 seconds an item, be through item 7 by 9 minutes and item 14 by 18. Behind? Switch fully to elimination.

Live drill online: Exam simulation — 8 items at exam pace —

<https://dmatprepguide.com/?try=drill&cat;=math&tier;=hard&n;=8&timed;=1>

Cheat sheet

- Four equations, four letters, six options, one fits all. ~75 s each, no negative marking.
- Scan shape first: direct value → one-step link → two-letter sum → long line last.
- Anchor: pin, propagate to the line with one unknown, repeat.
- No anchor? Combine two lines to cancel a letter.
- Elimination: easiest line on all six, next on survivors, stop at one.
- - - is +. $A = B - 1$ means $A = B + 1$.
- - $A + B = 3$ means $B - A = 3$; B is bigger.
- $B \div 4 = A$: B is the big one, a multiple of 4.
- $2 \times C - 1 = B$: B is odd; even-B options die.
- Odd sum, mixed parity. Even sum, same parity.
- Three pair sums: add, halve, subtract each pair.
- Long line: (pluses) - (minuses). Survivors only.
- Options differ in one letter? Test the line with that letter.
- A line that passes everything is redundant — move on.
- Never blank. Past 90 s, take the best survivor and go.

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