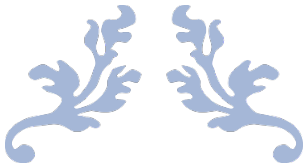

ALGECAL CALCULATOR MANUALS

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Vertical algebraic calculator (12/12/2025)

Negative coefficient notations:

$2\hat{2} = 2 \times 10 - 2 \times 1 = 20 - 2 = 18;$ ..... (1)

$4\hat{3}1 = 4 \times 10^2 - 3 \times 10 + 1 = 400 - 30 + 1 = 371$ ..... (2)

$3\hat{4}\hat{7} = 3 \times 10^2 - 4 \times 10 - 7 = 300 - 40 - 7 = 26\hat{7} = 253$ ..... (3)

$\hat{5}\hat{8} = -5 \times 10 - 8 = -58 = \hat{6}2$ ..... (4)

In the above**,** we introduce negative coefficient notations**.** (**1**) is a two-digit number with a negative number (-2) at ones place, which is the same as traditional decimal number 18. (**2**) is a three-digit number with a negative number (-3) at tens place, which is the same as traditional decimal number 371. (3) is another three-digit number with a negative number at tens place (-4) and a negative number at ones place (-7), which is the same as traditional decimal number 253. (4) is a two-digit number with both negative numbers at tens place (-5) and at ones place (-8), which is the same as traditional decimal number -58; This number can also be written, using the new notation, as $\hat{6}2$.

More information:

https://math.ou.edu/~mzhu/AI.html

Go to AlgeCal calculator:

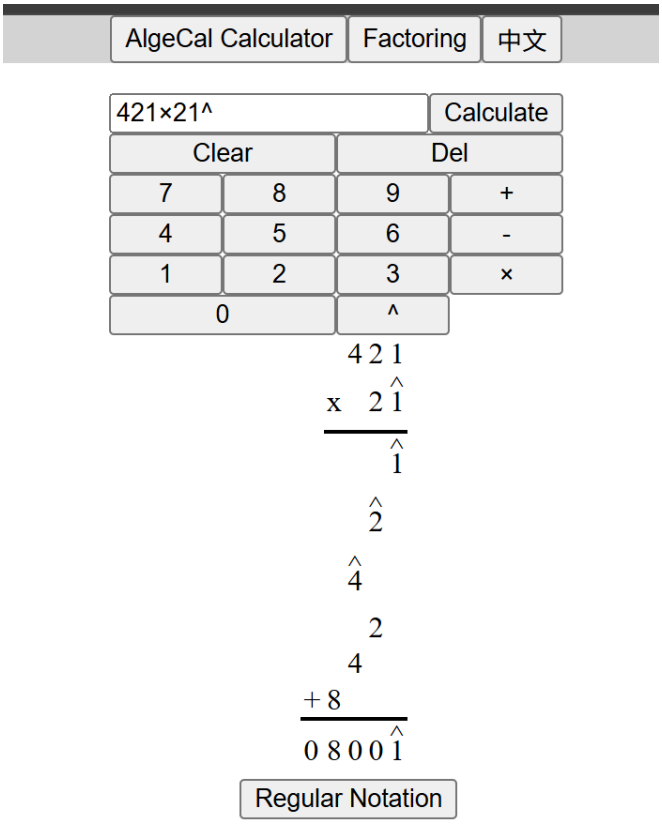
https://luv.iolet.org/algecalc/

Book:

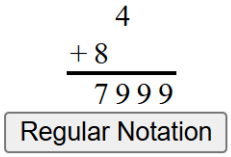
https://www.amazon.com/dp/B0D9765XX8

Keys

- Typing **“21^”** will display as **“$2\hat{1}$”**.
- Use **“*”** or **“×”** to represent multiplication.

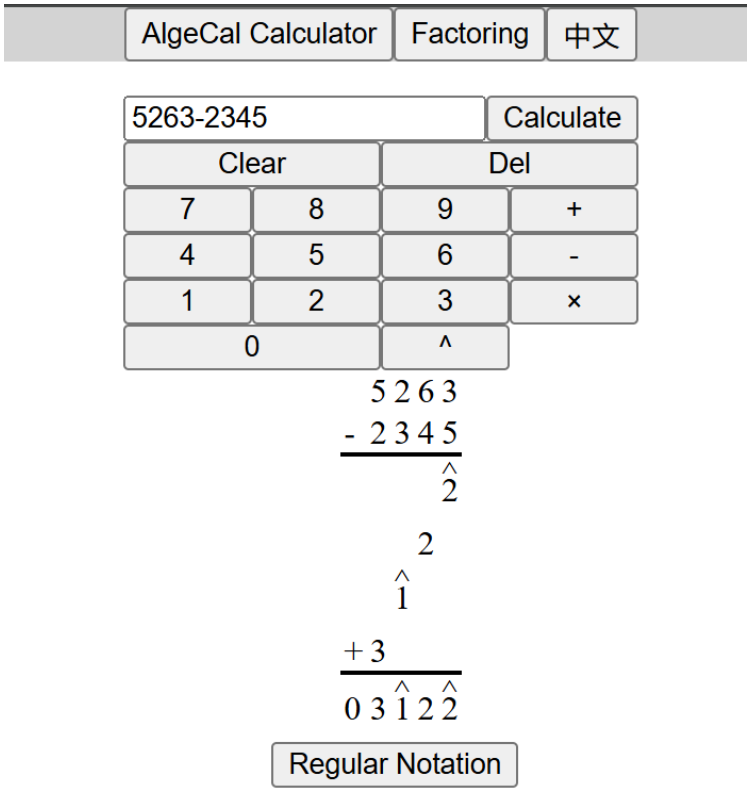


Tap **Regular Notation** to show numbers in normal format.



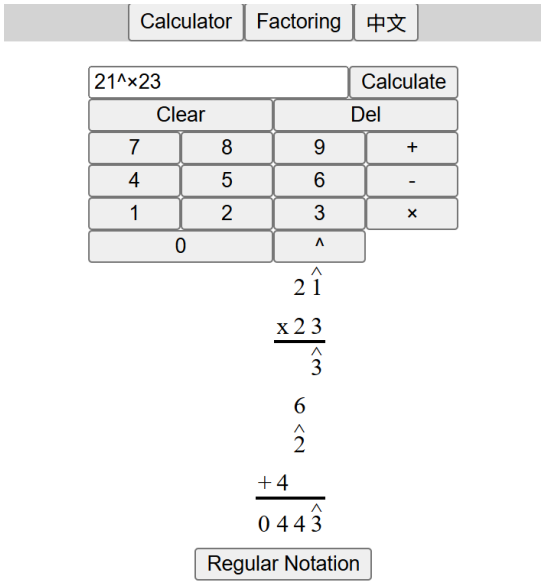
Subtraction from the left to the right.

With the introduction of negative coefficients, subtraction can be performed from left to right—just as we do when subtracting polynomials.



Cross product and factoring practice

Writing **19 = 2**$\hat{1}$, we can observe a cross product pattern that is useful for factorization. Can you determine mentally whether **437** is a prime number? How about **44**$\hat{3}$**,** is it prime?



Once you recognize that **44**$\hat{3}$ is not a prime number, you can practice factoring trinomials as well: