Shunting Yard

Infix to postfix

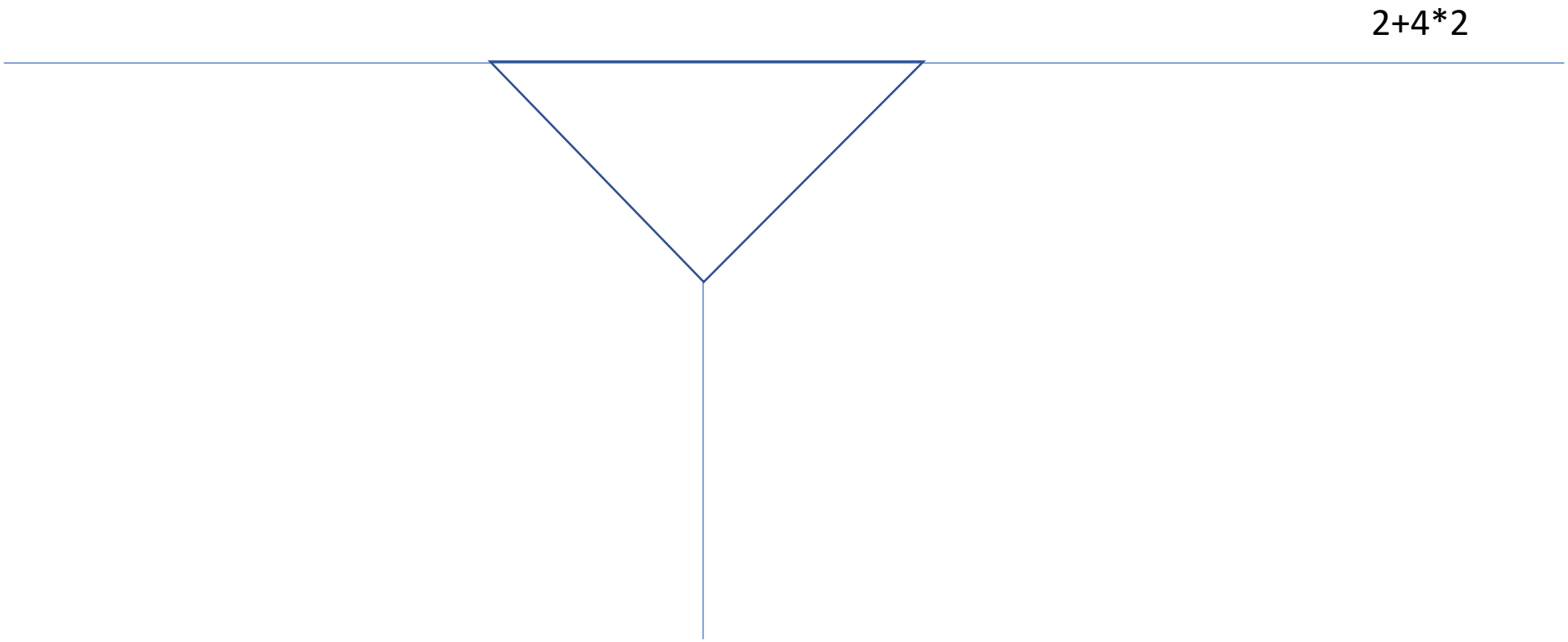
- BODMAS applies

- 2+4*2 = 10
- (2+4)*2 = 12

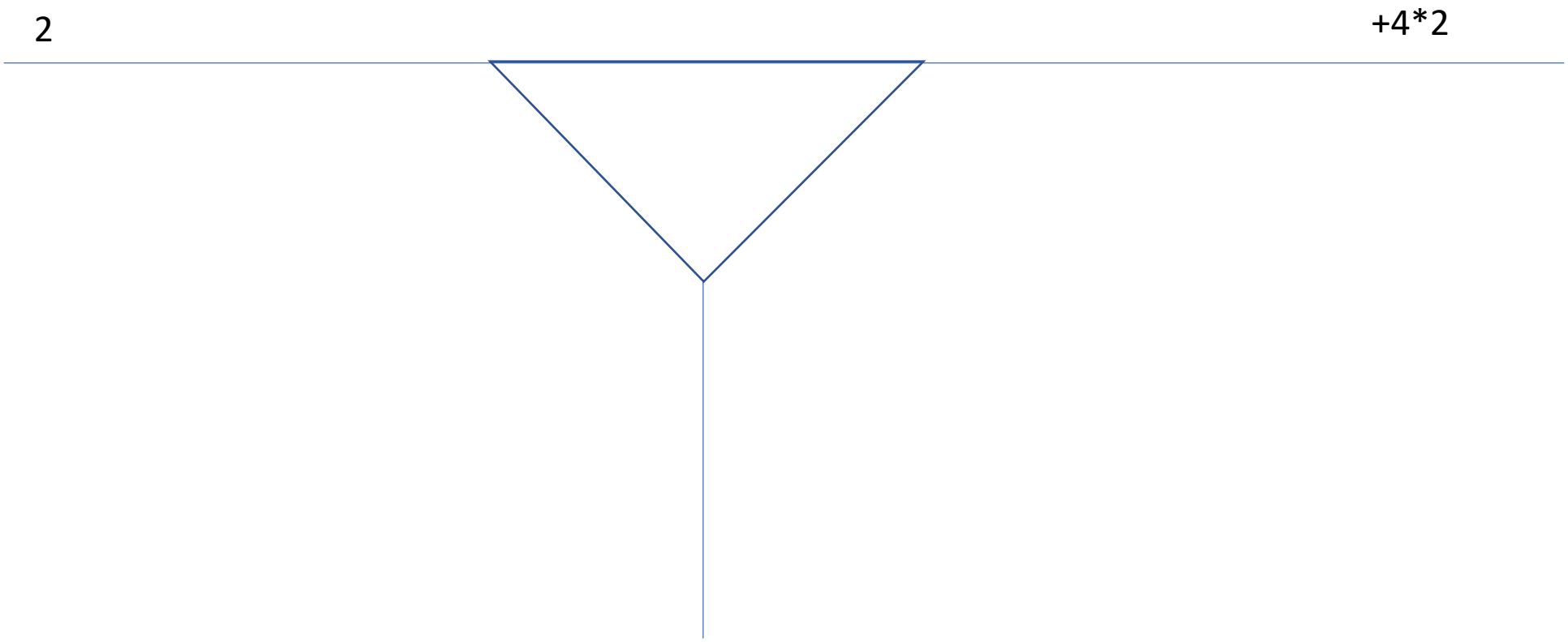
- Infix to postfix
  - 2+4*2 becomes 242*+
  - (2+4)*2 becomes 24+2*

First Example 2+4*2

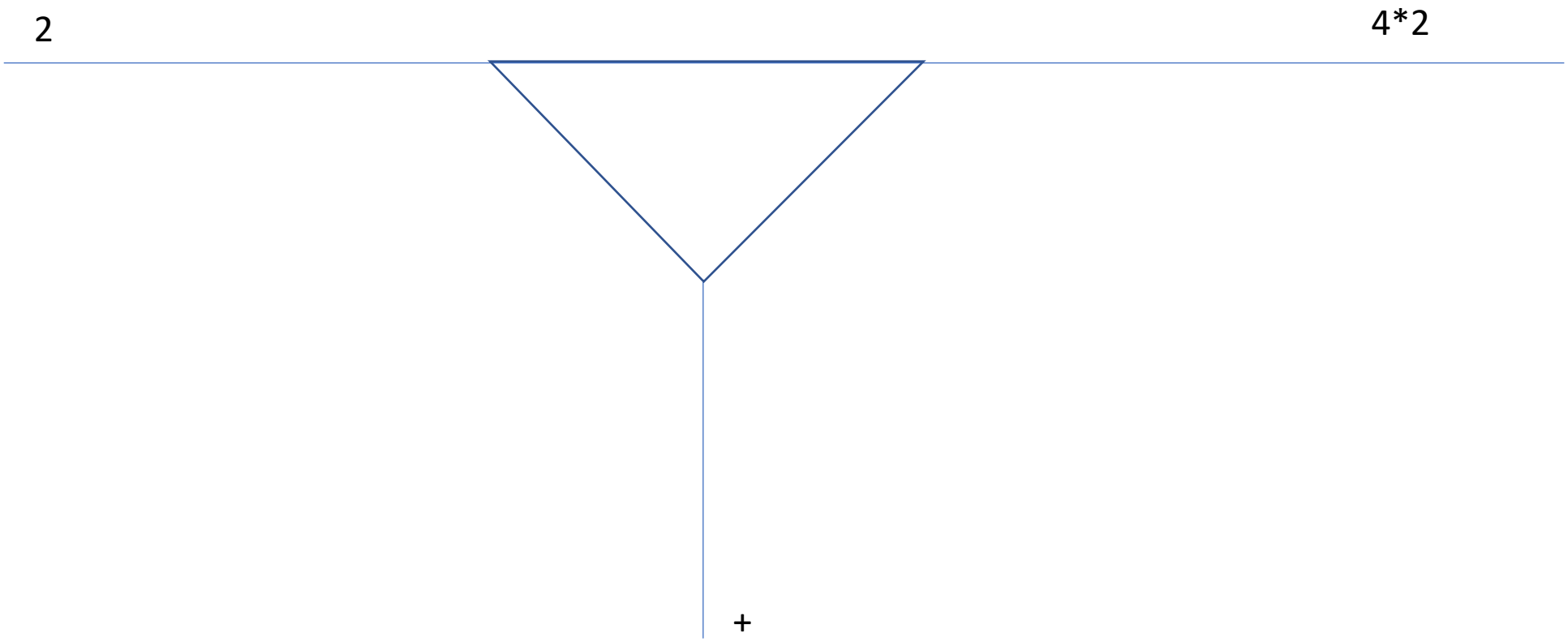
2+4*2



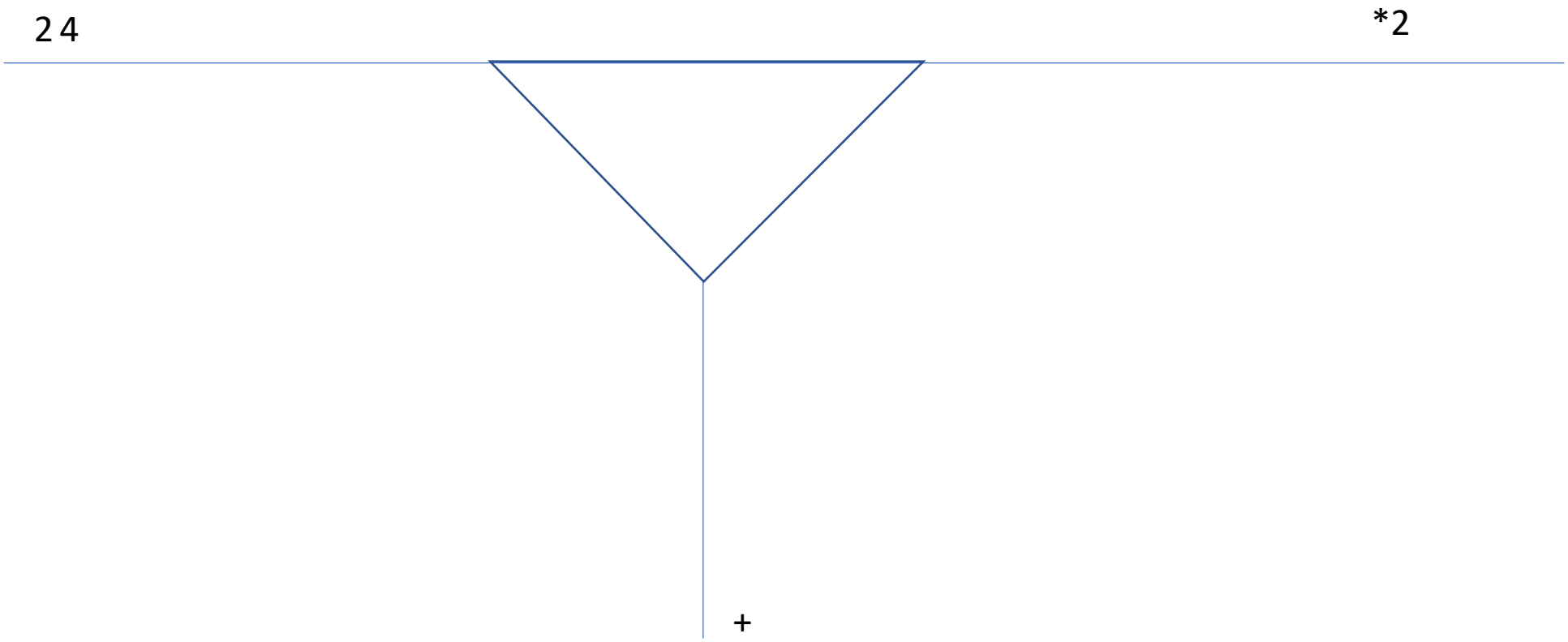
2 goes left



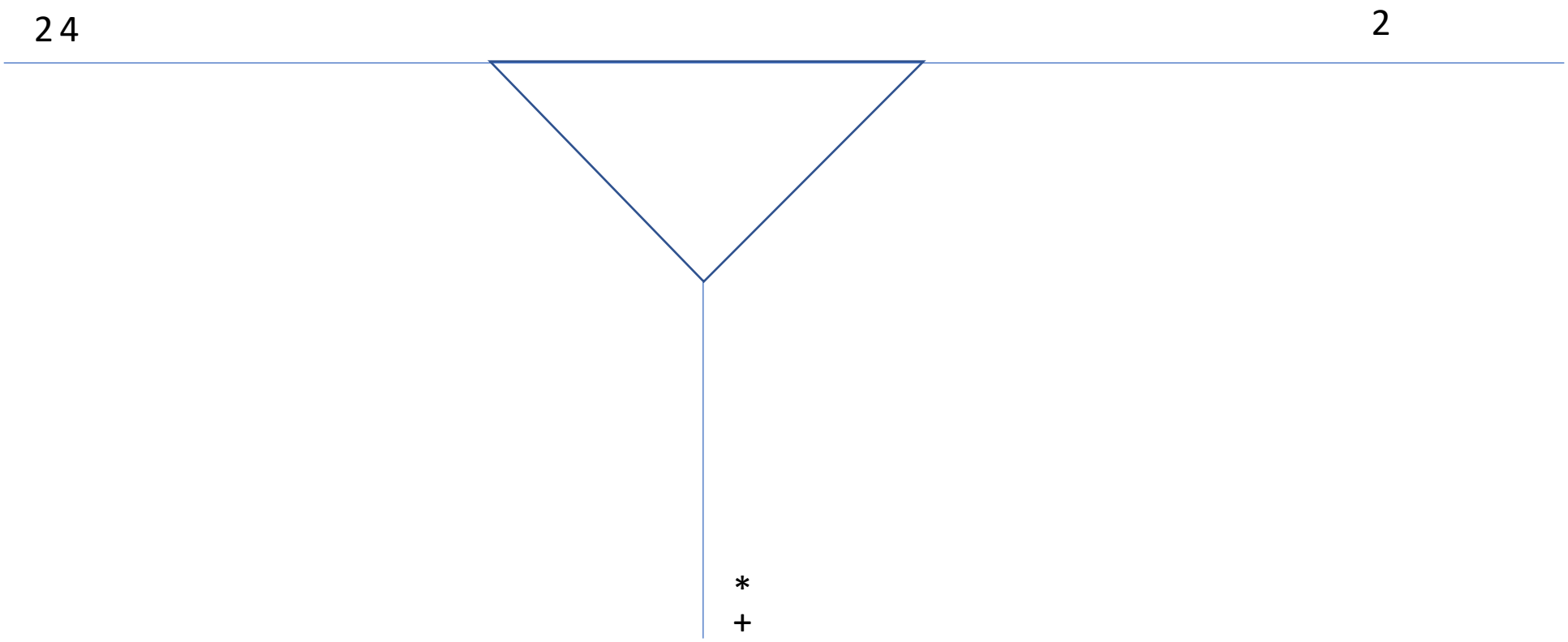
Stack empty + moves down



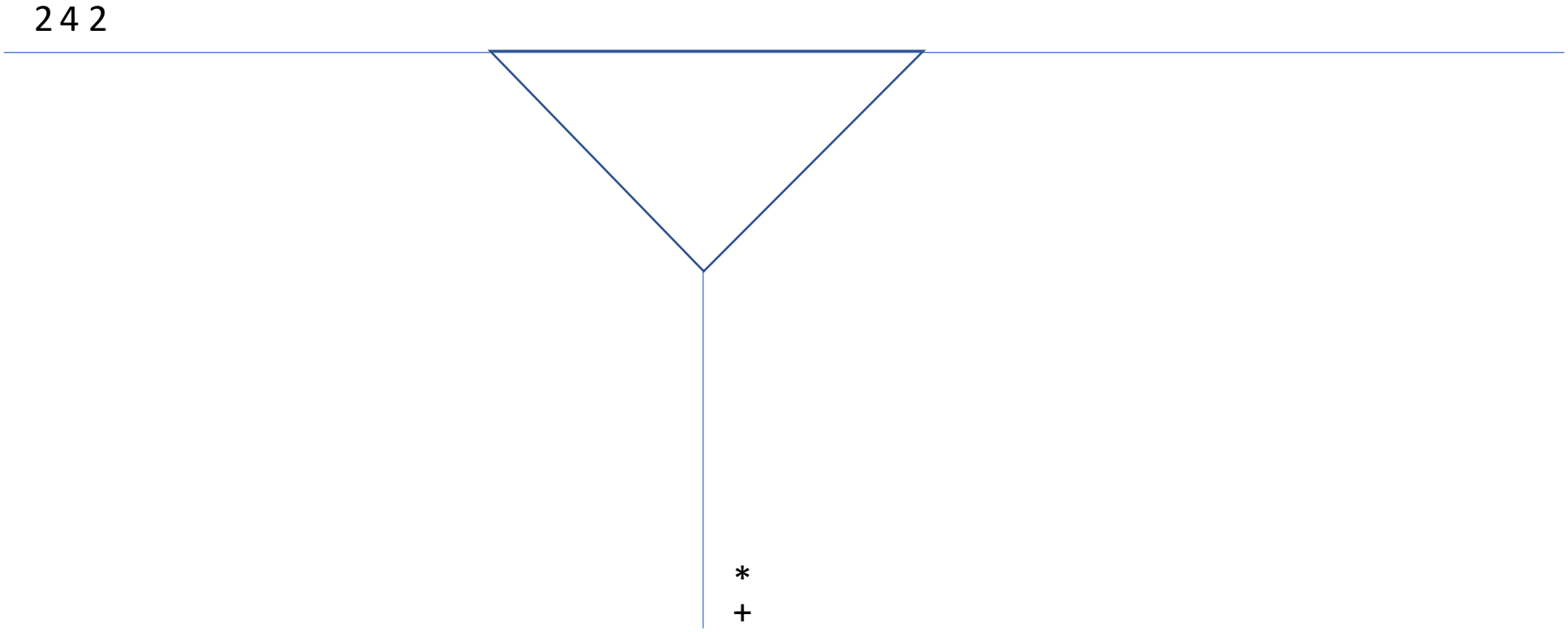
4 moves across



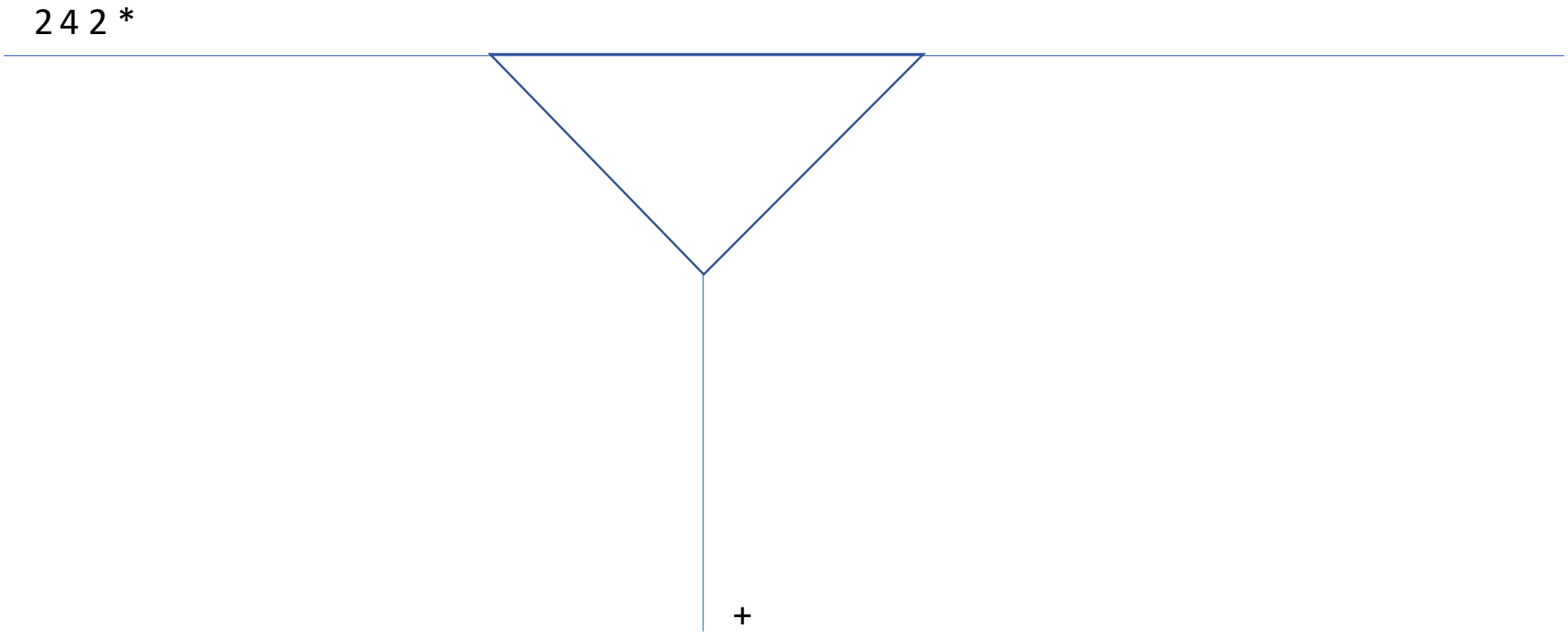
+ is lower than *, so * moves down



2 goes across

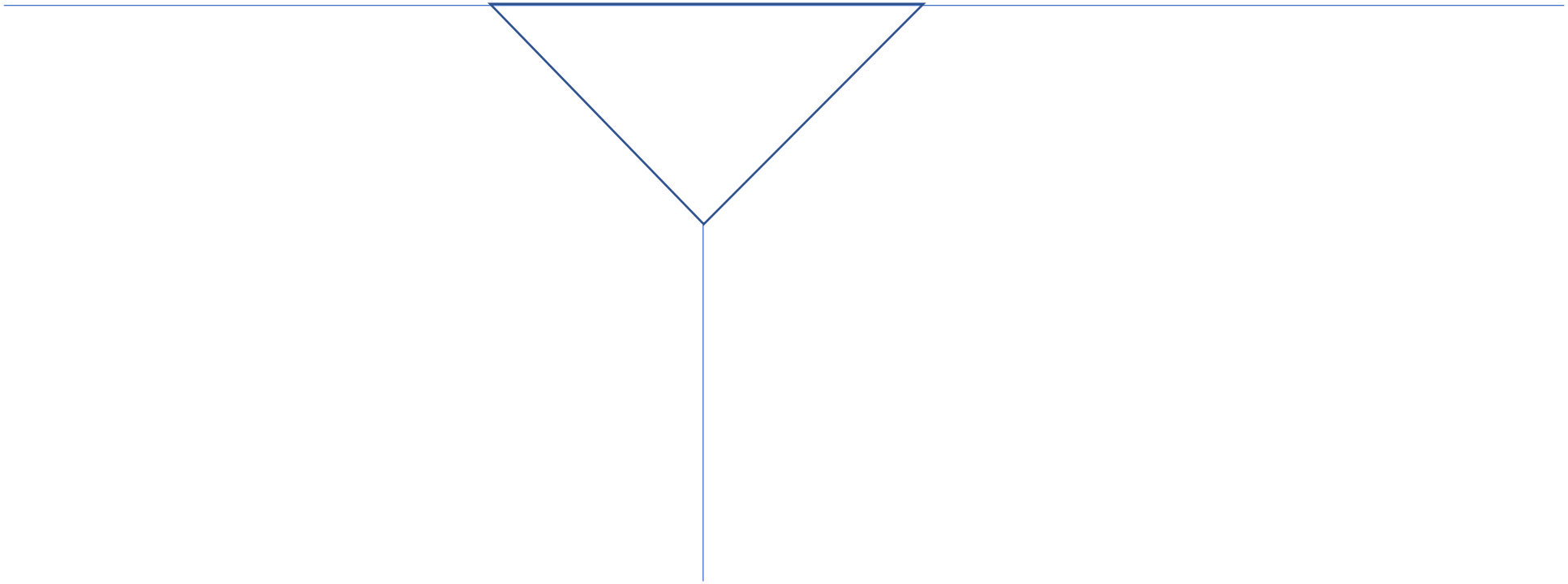


* Comes up



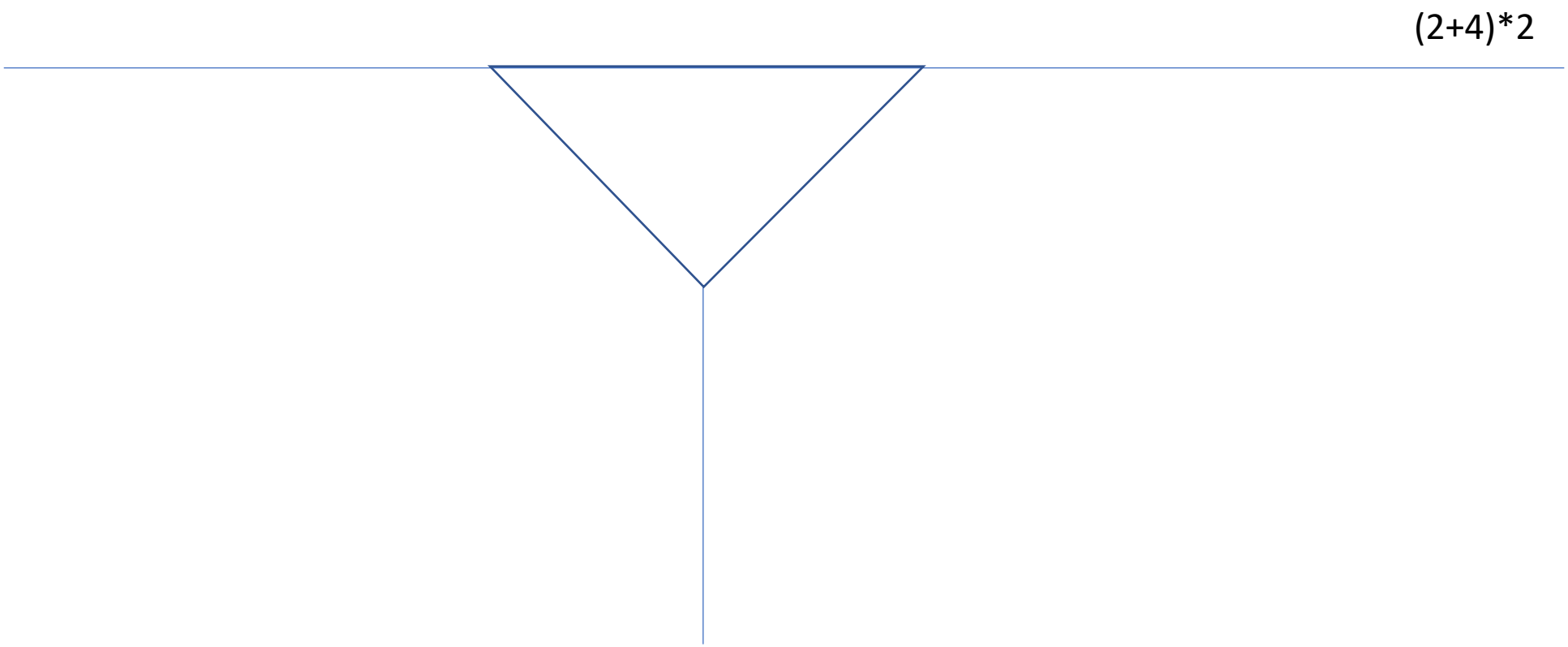
+ Comes up

2 4 2 * +

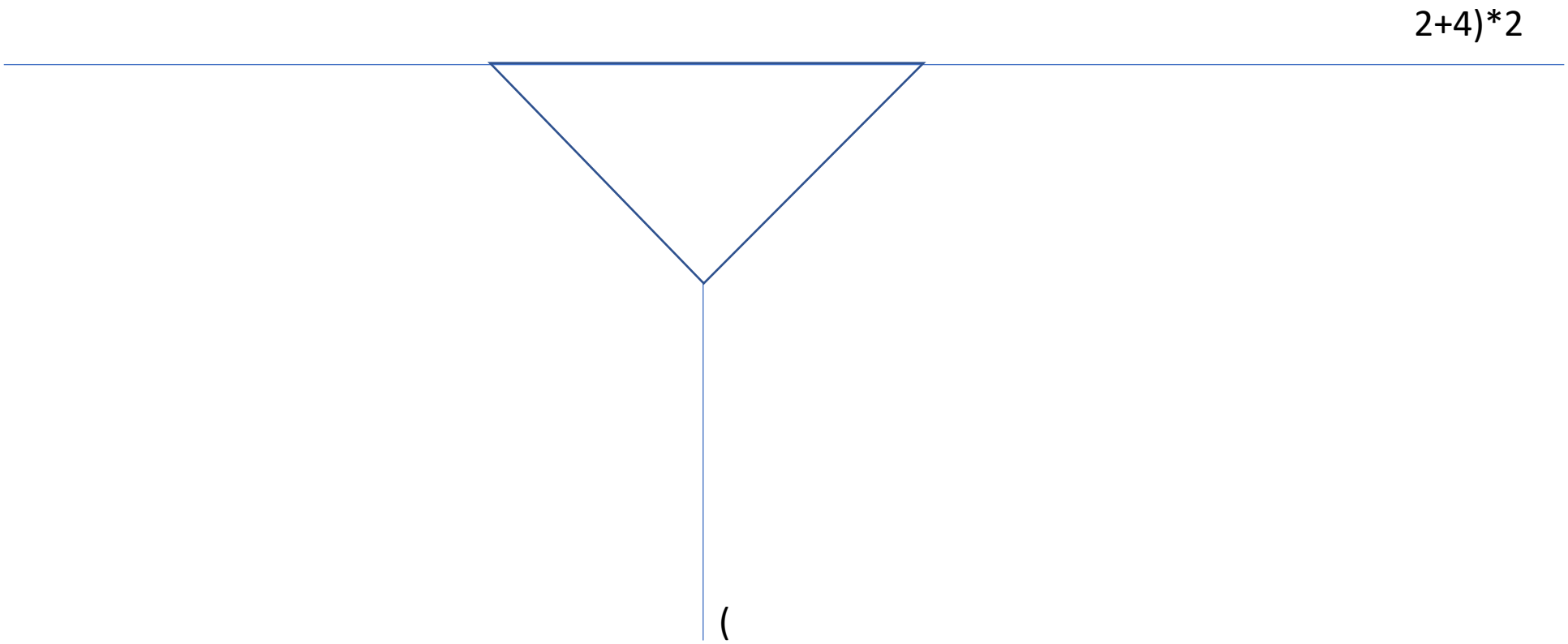


Second Example (2+4)*2 = 12

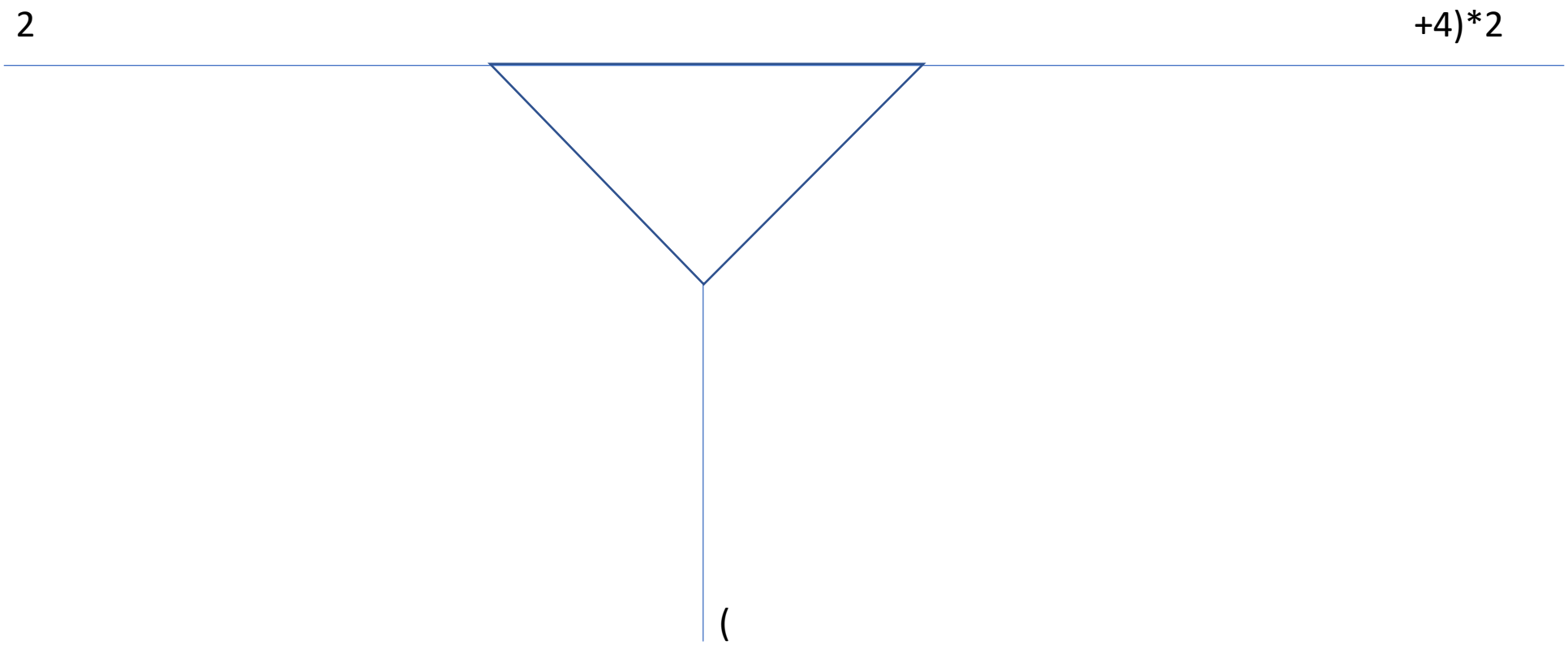
(2+4)*2



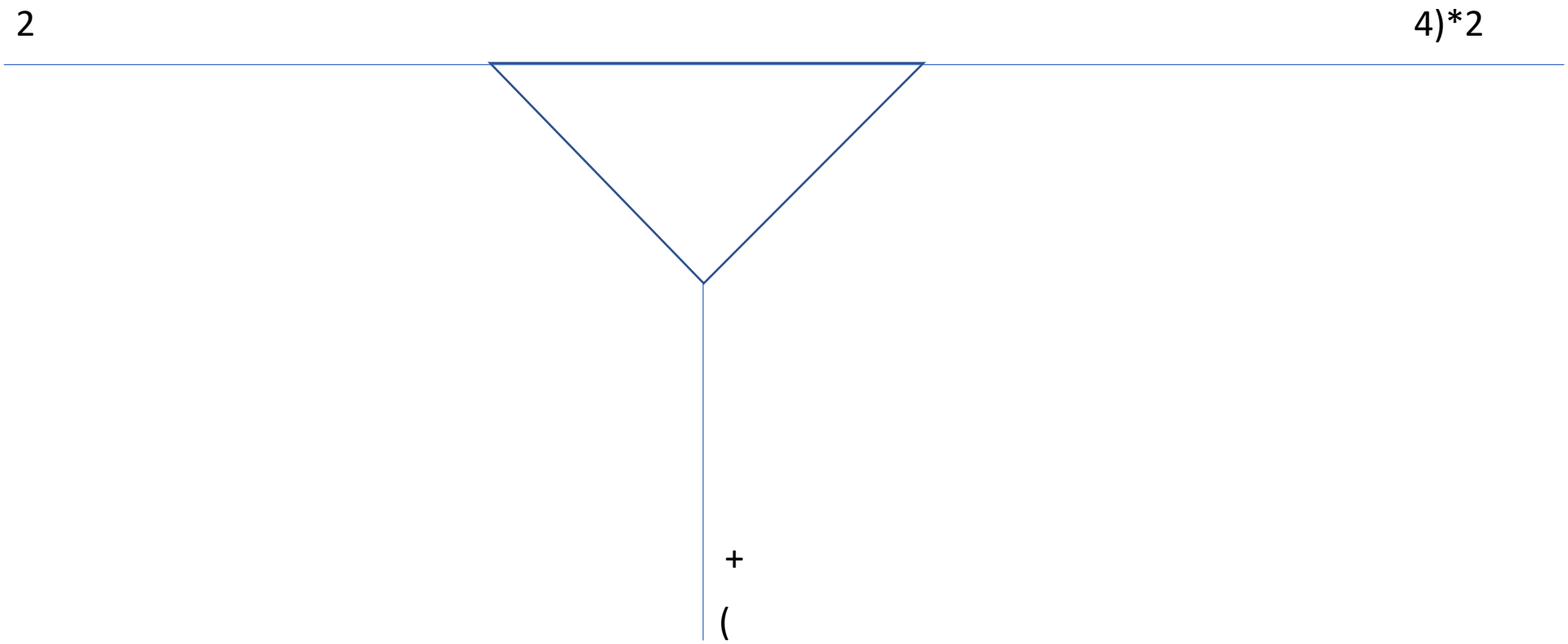
Left bracket moves down



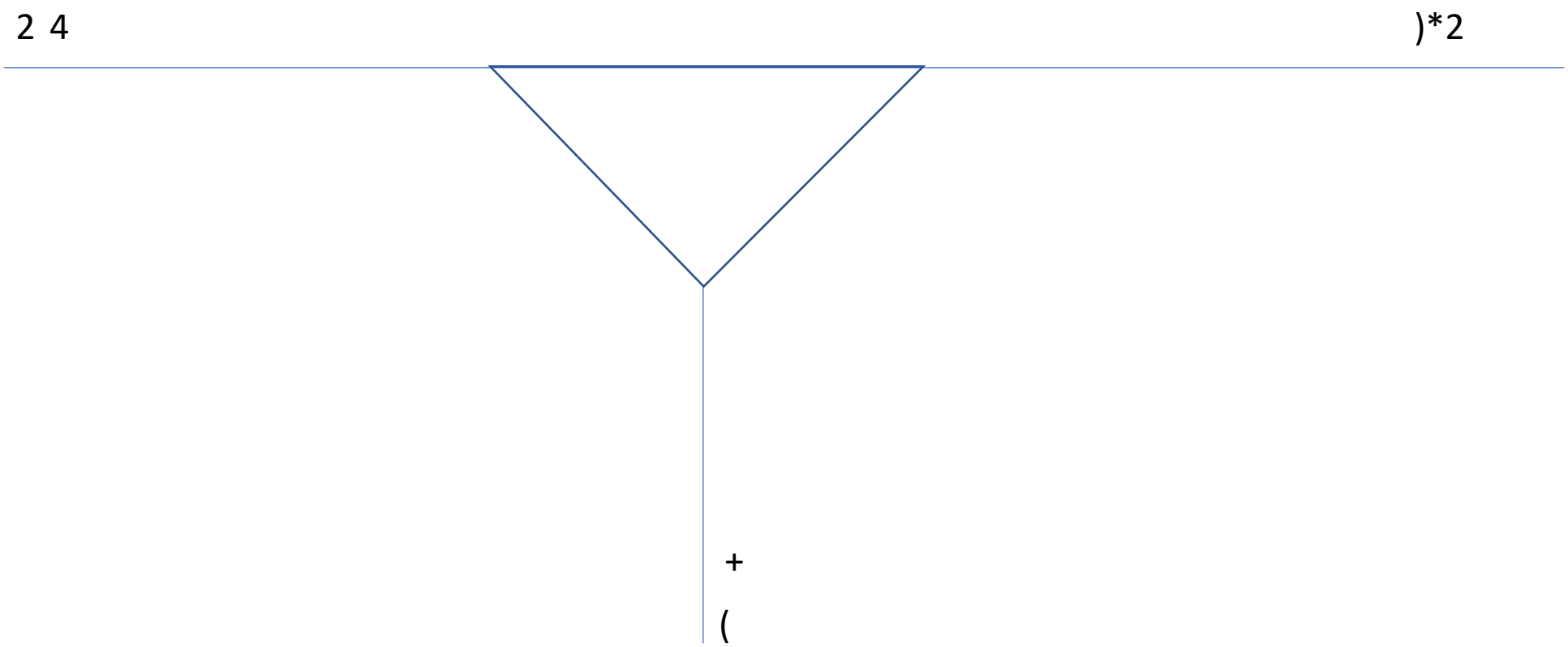
2 goes across



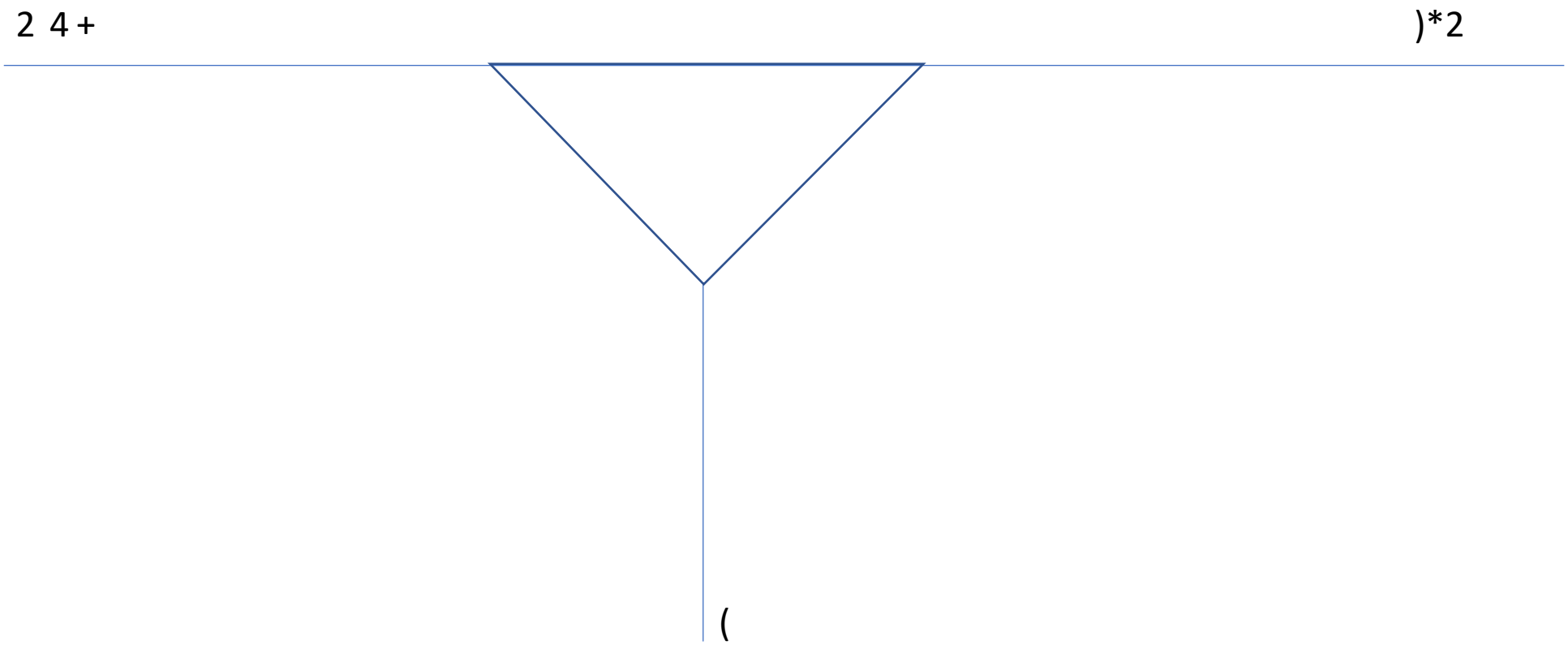
+ moves down



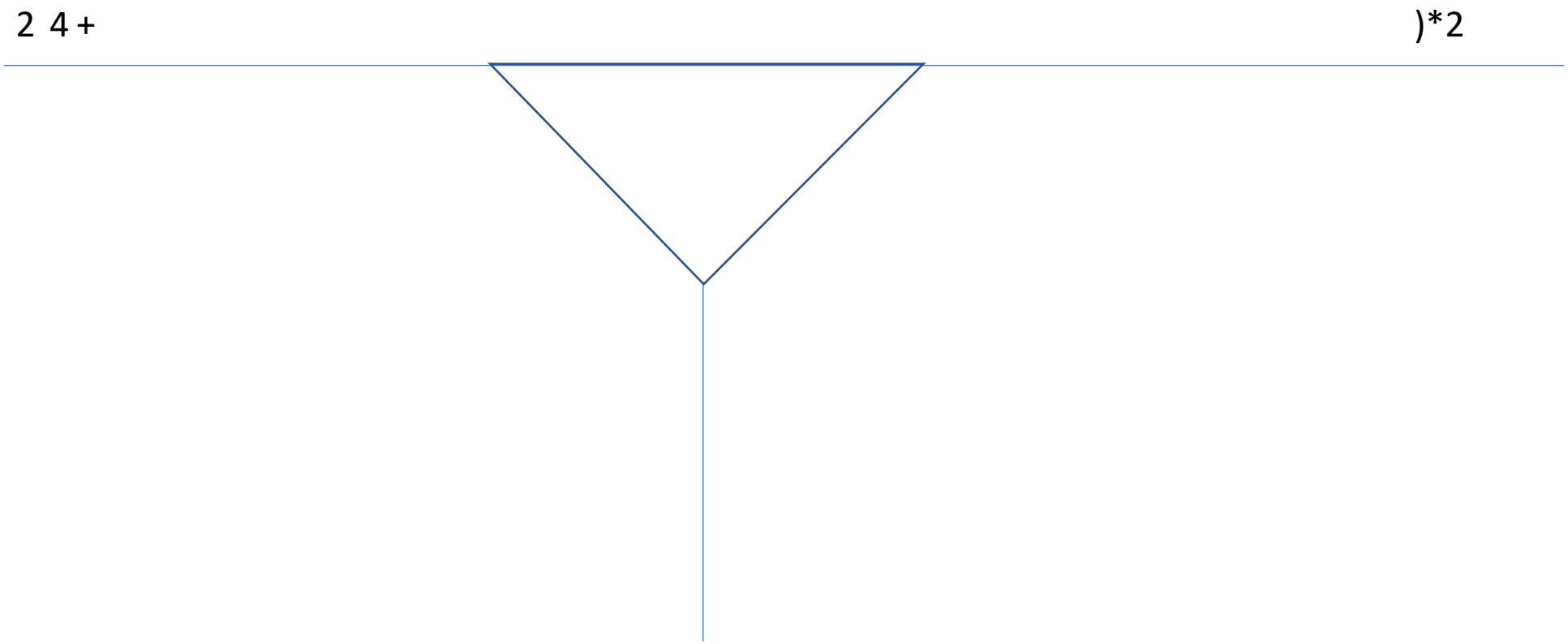
4 goes across



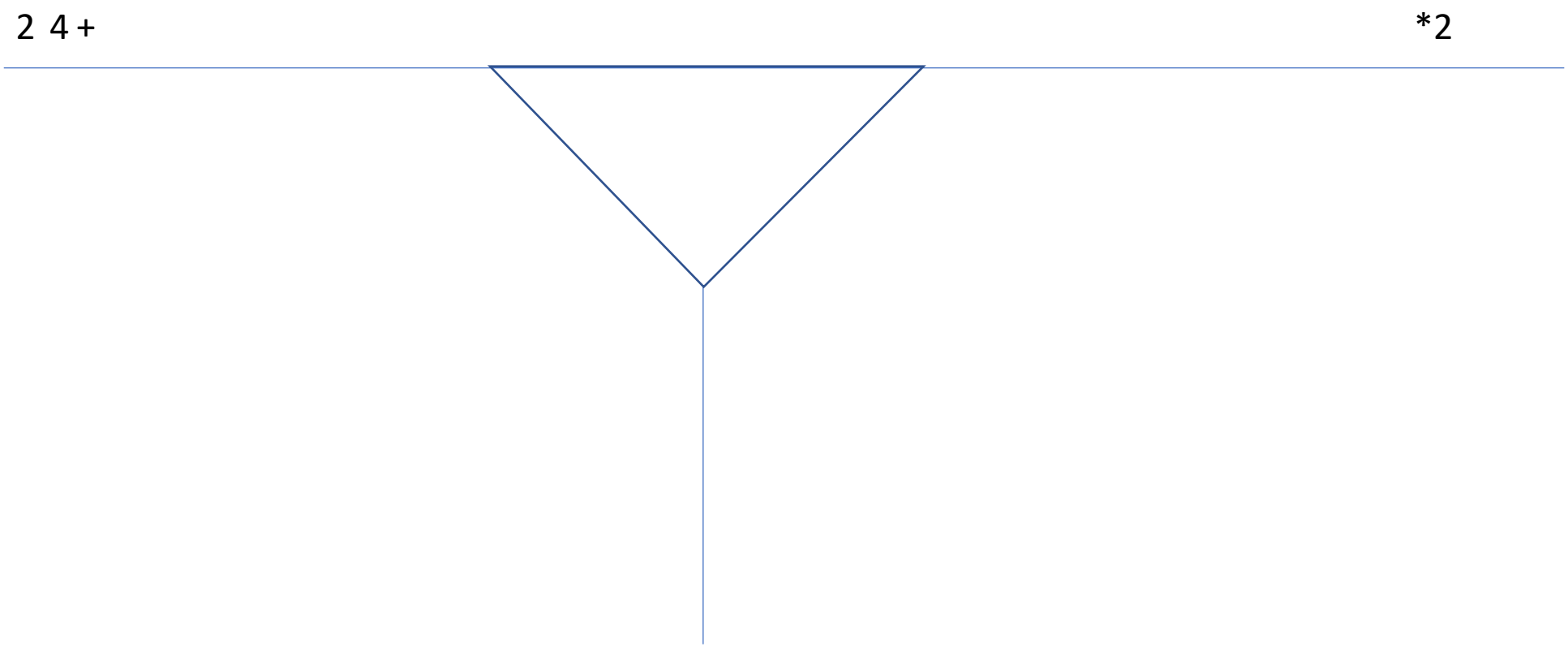
Right bracket – so move + up



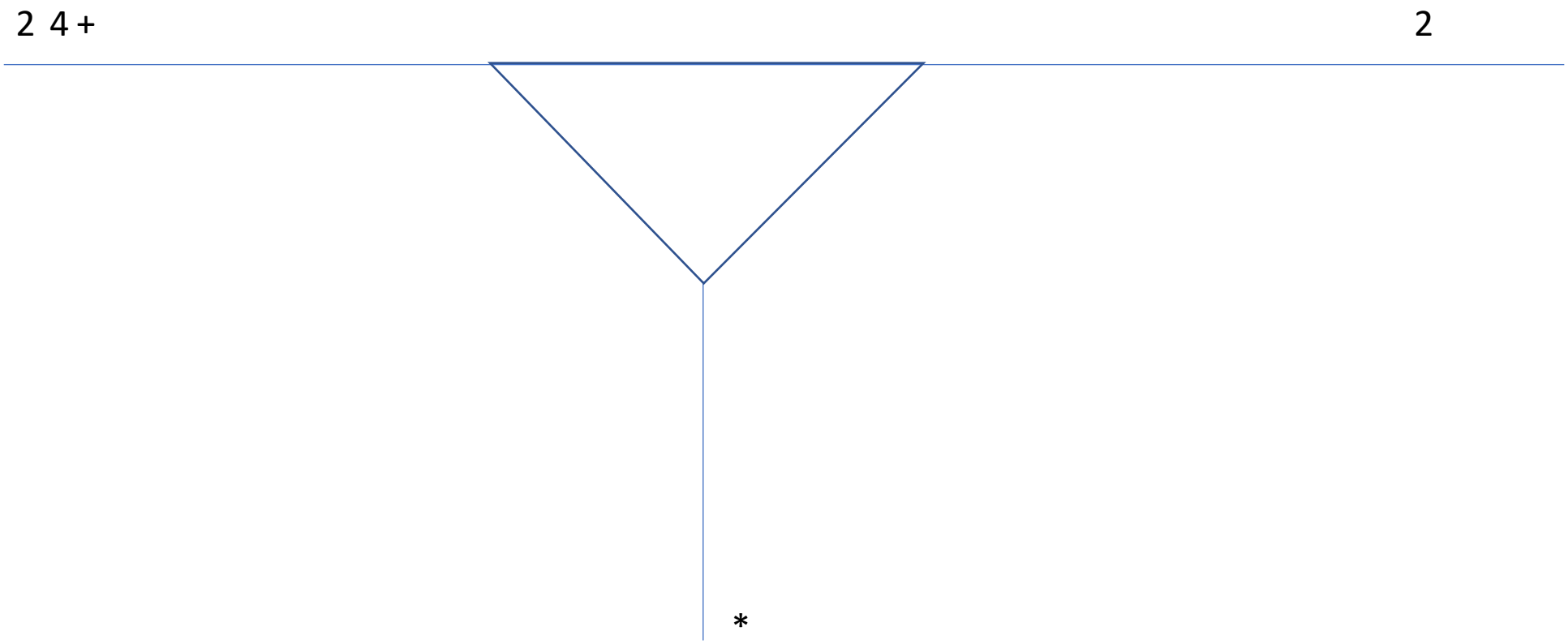
Left bracket – remove



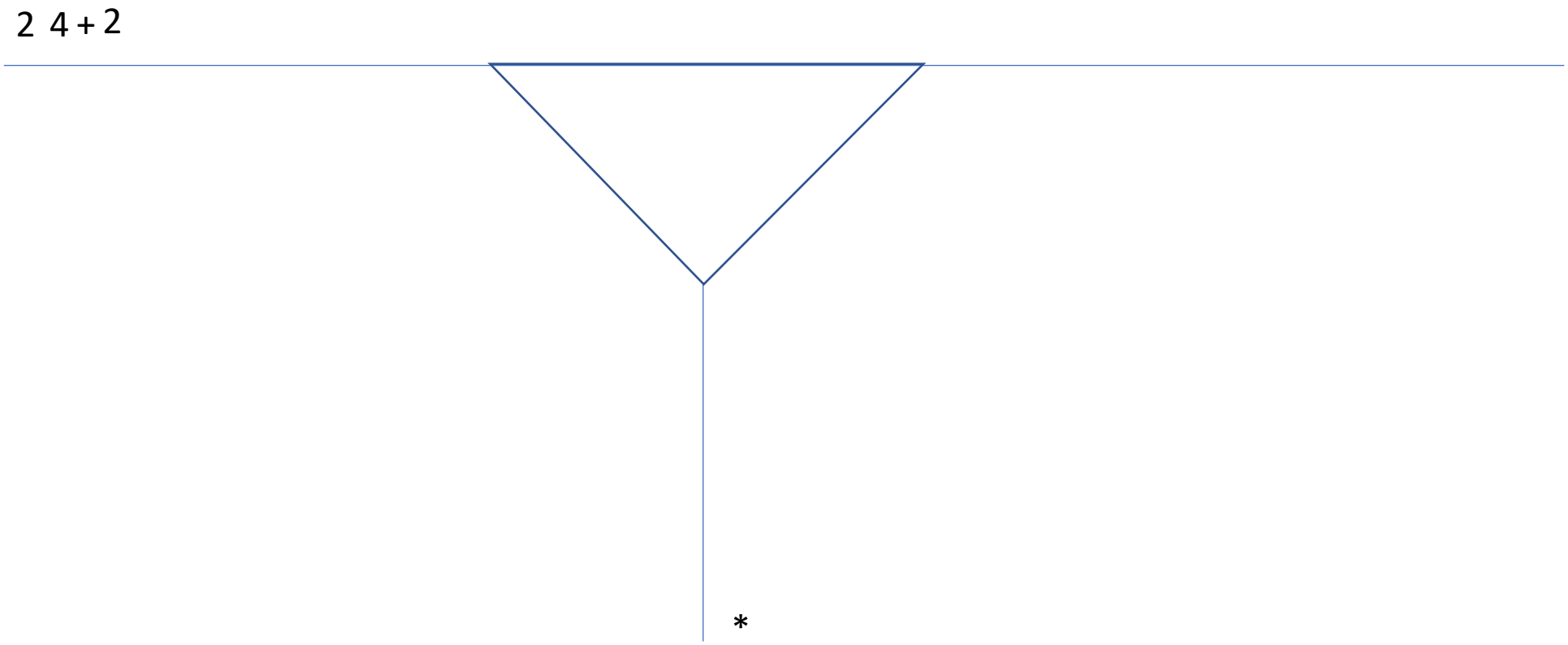
Right bracket – remove



* Moves down

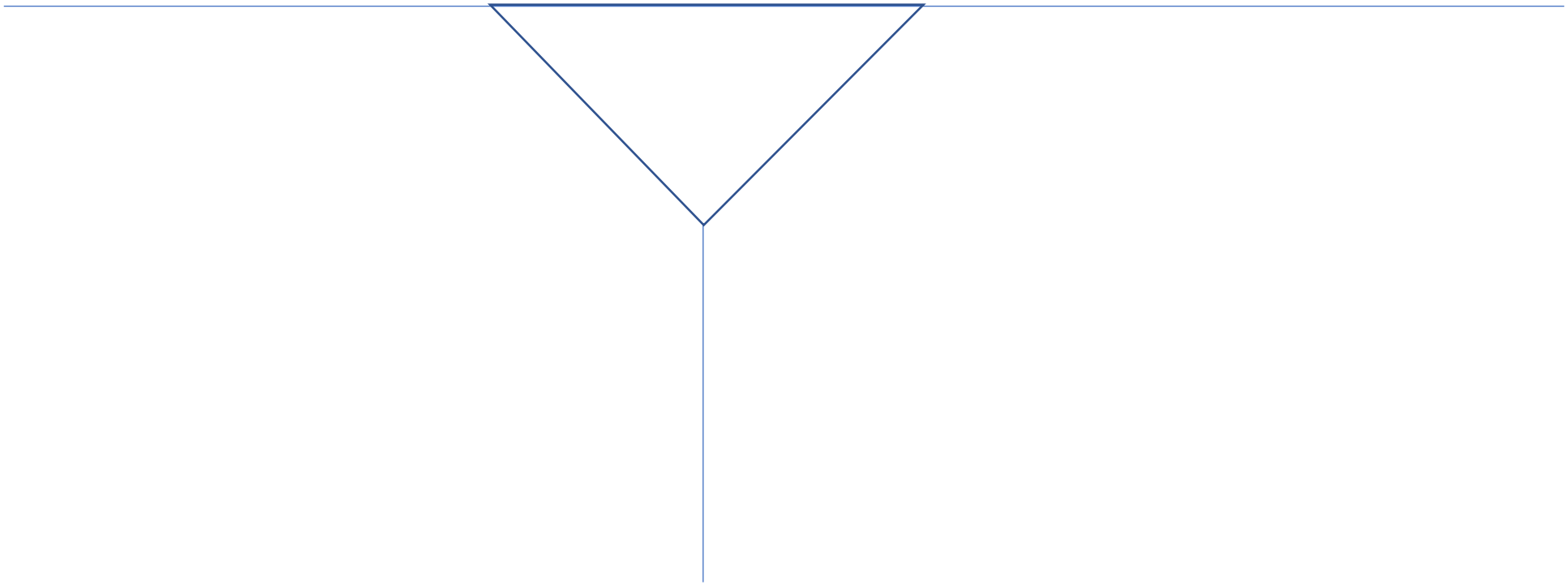


2 goes across



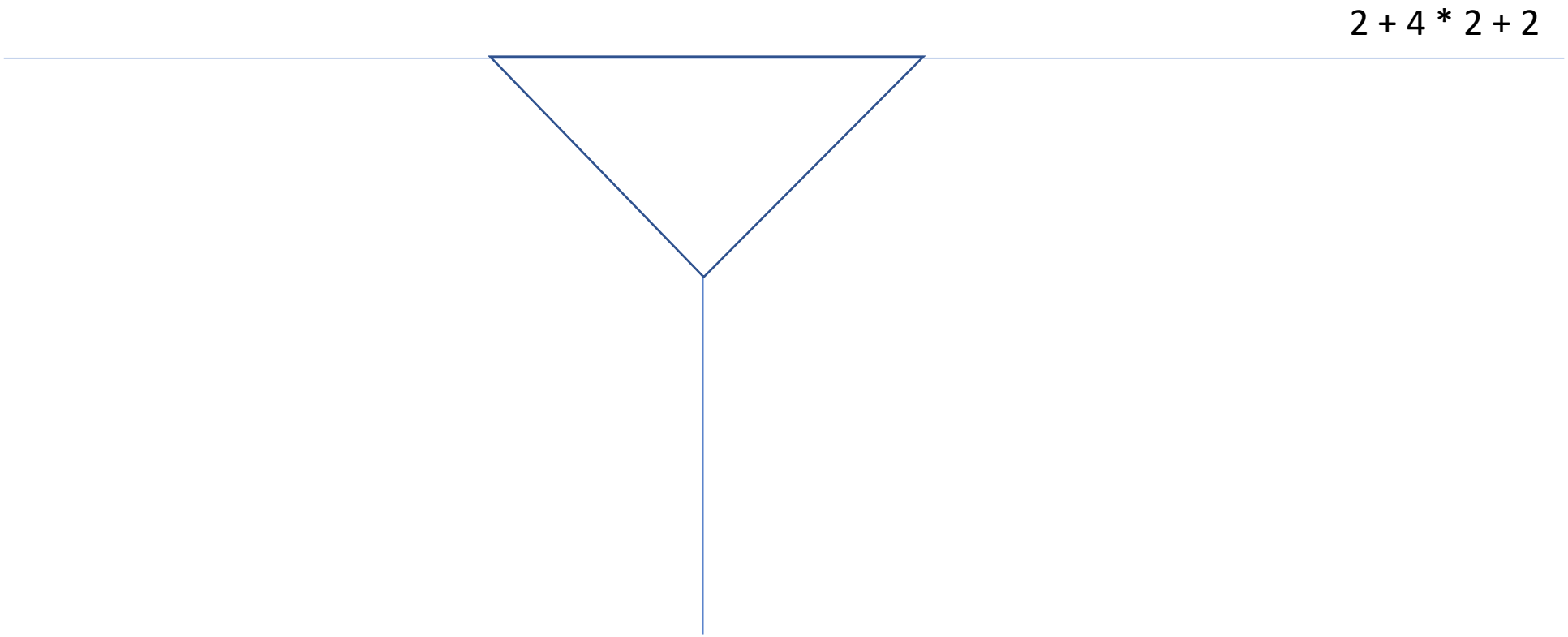
* Comes up

2 4 + 2 *

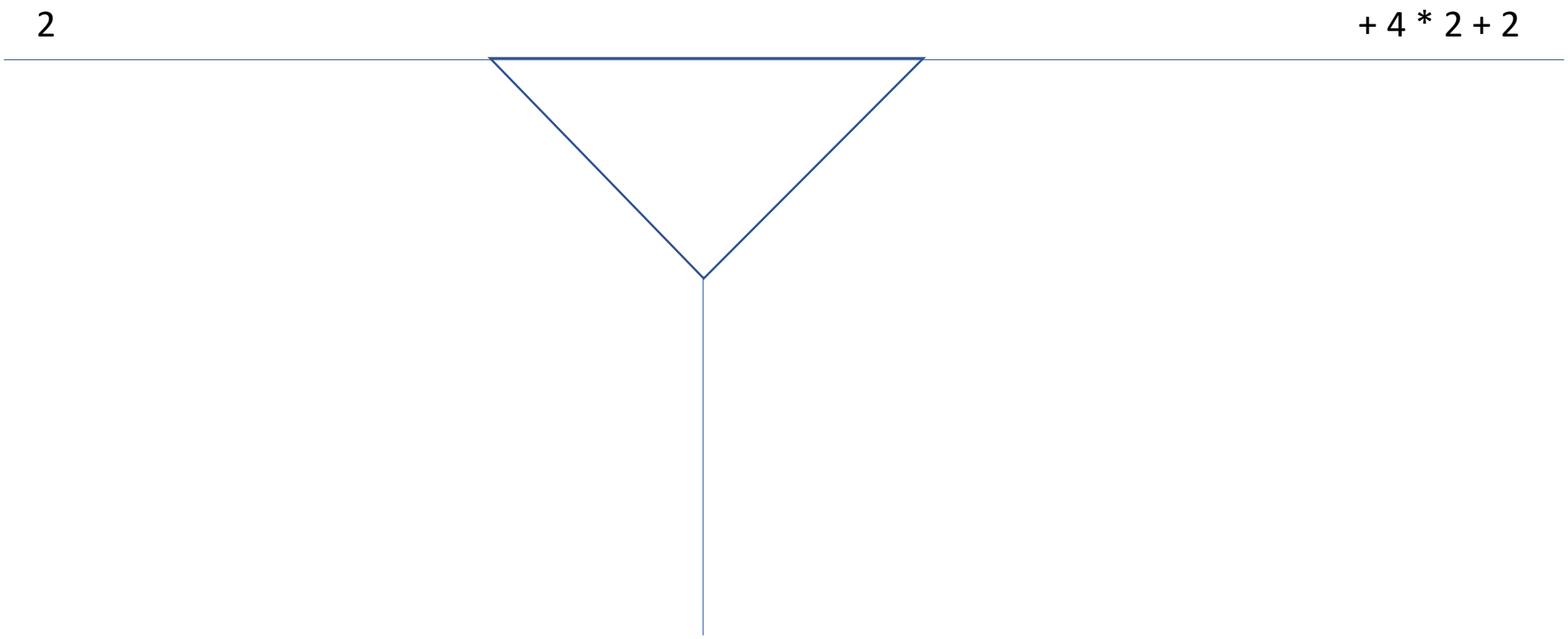


Bonus Round

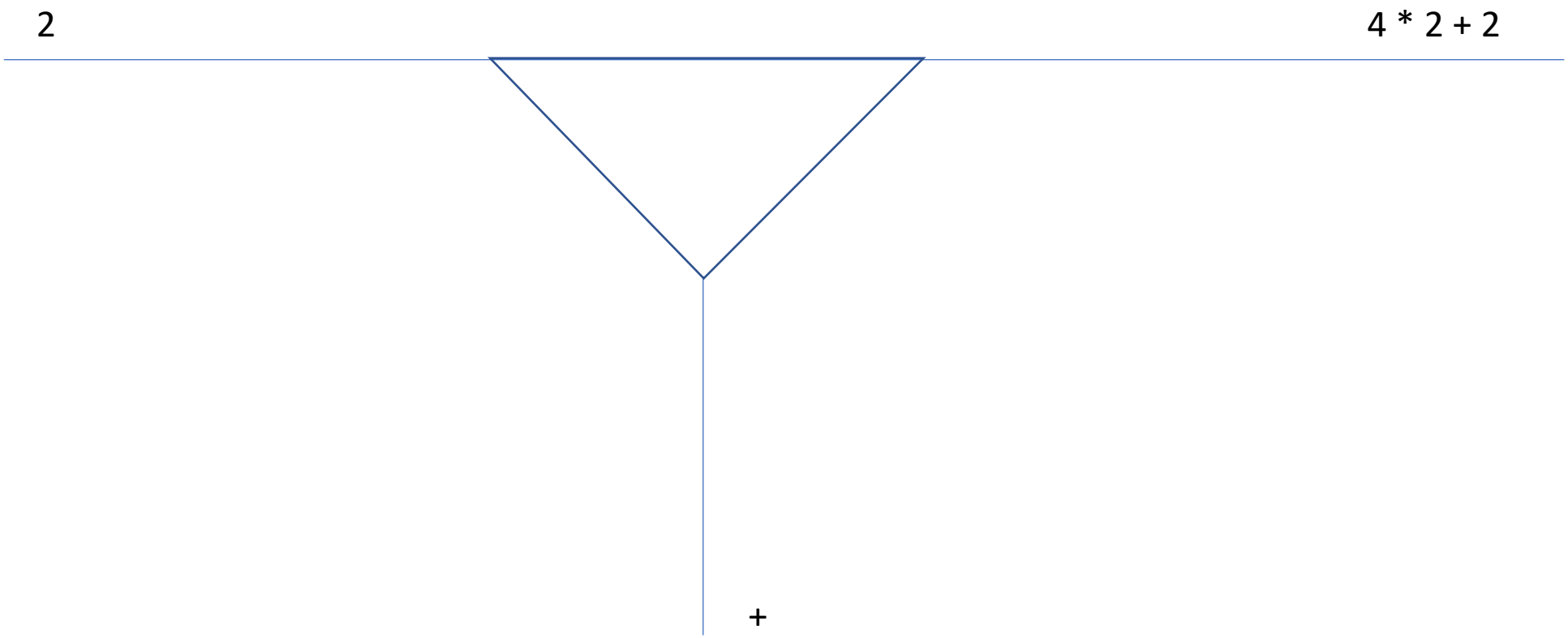
2 + 4 * 2 + 2



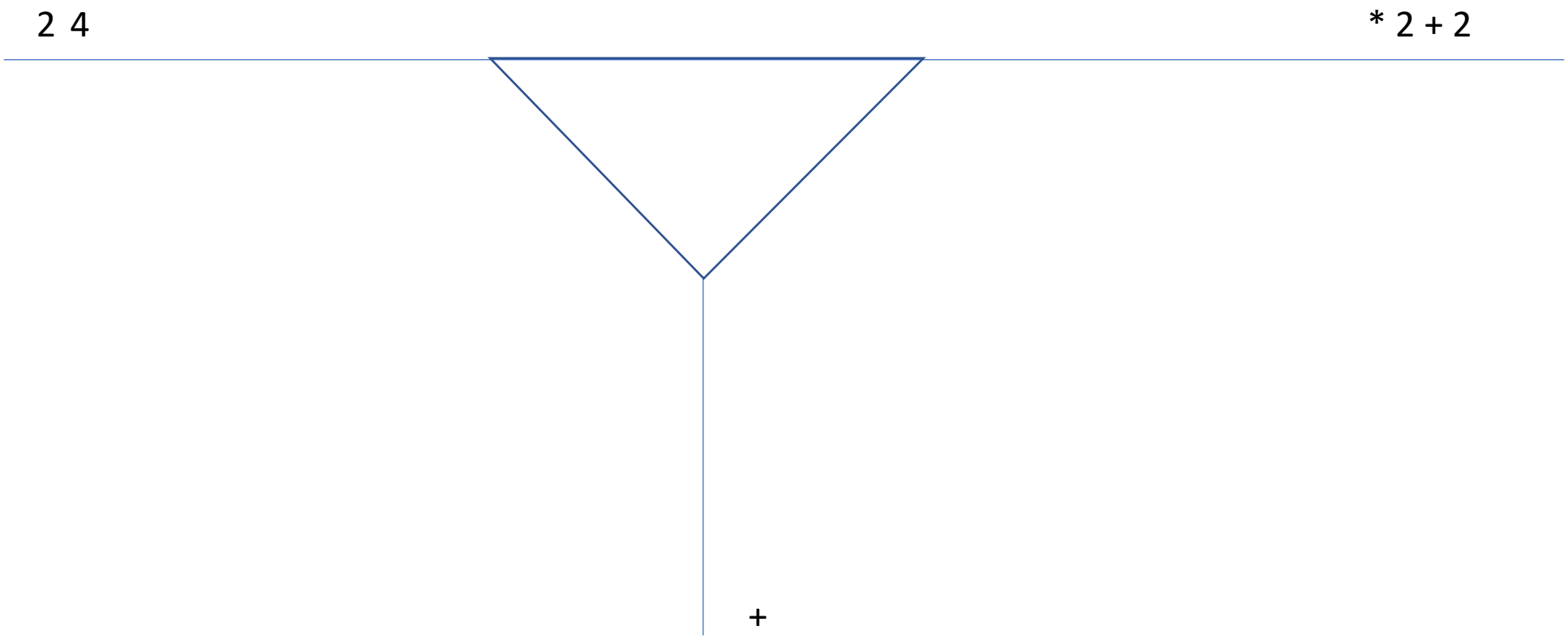
2 goes across



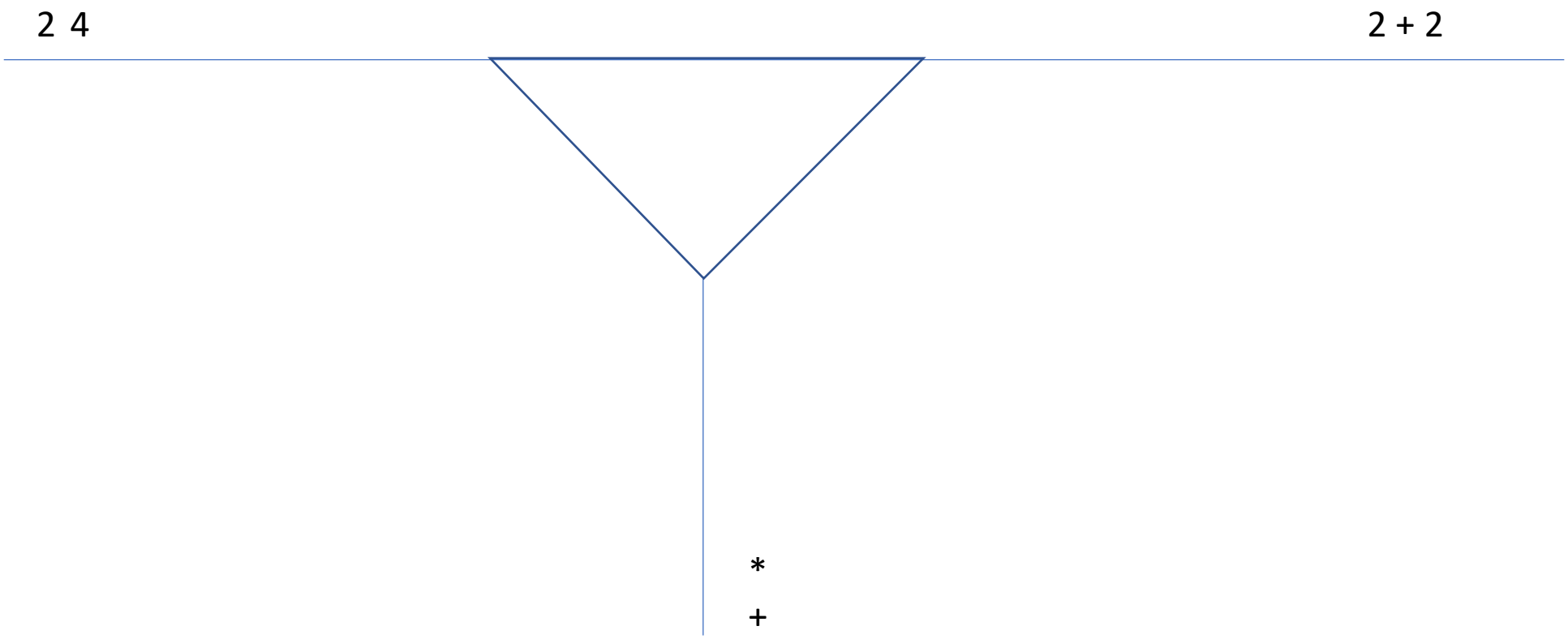
Stack empty, plus moves down



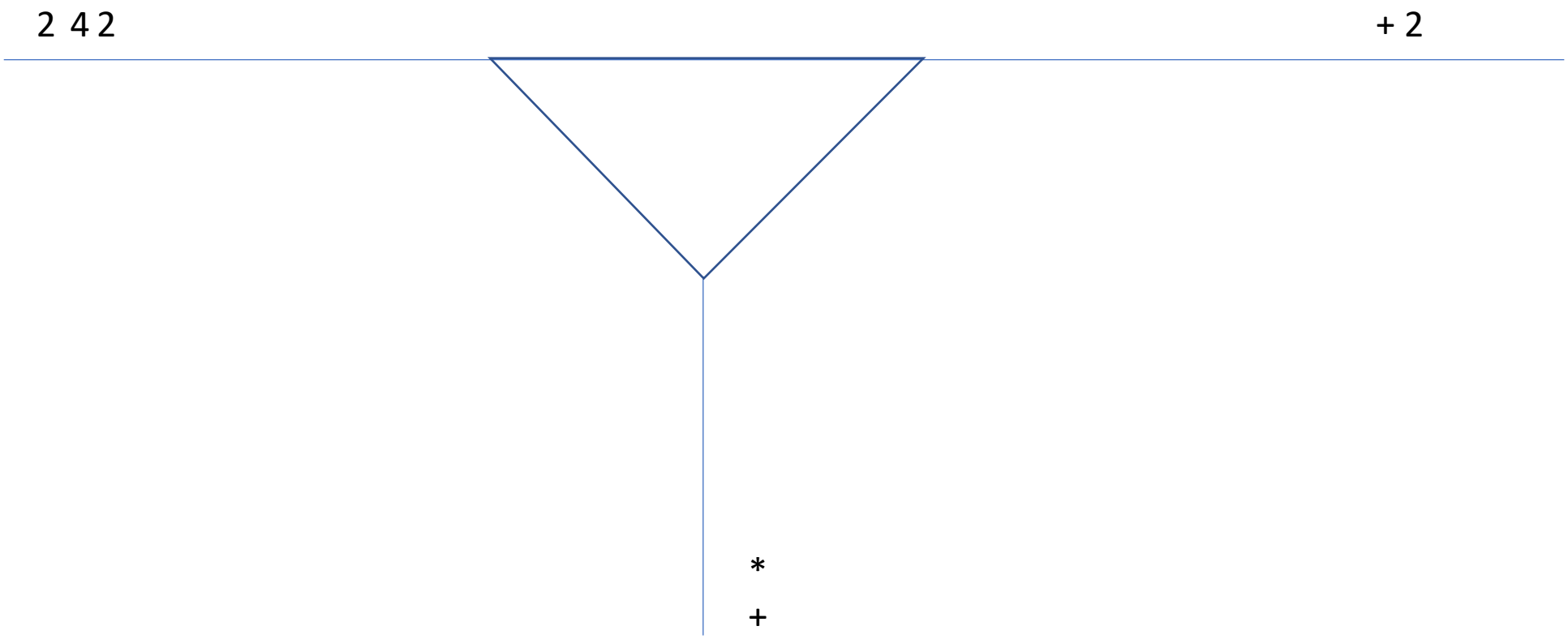
4 goes across



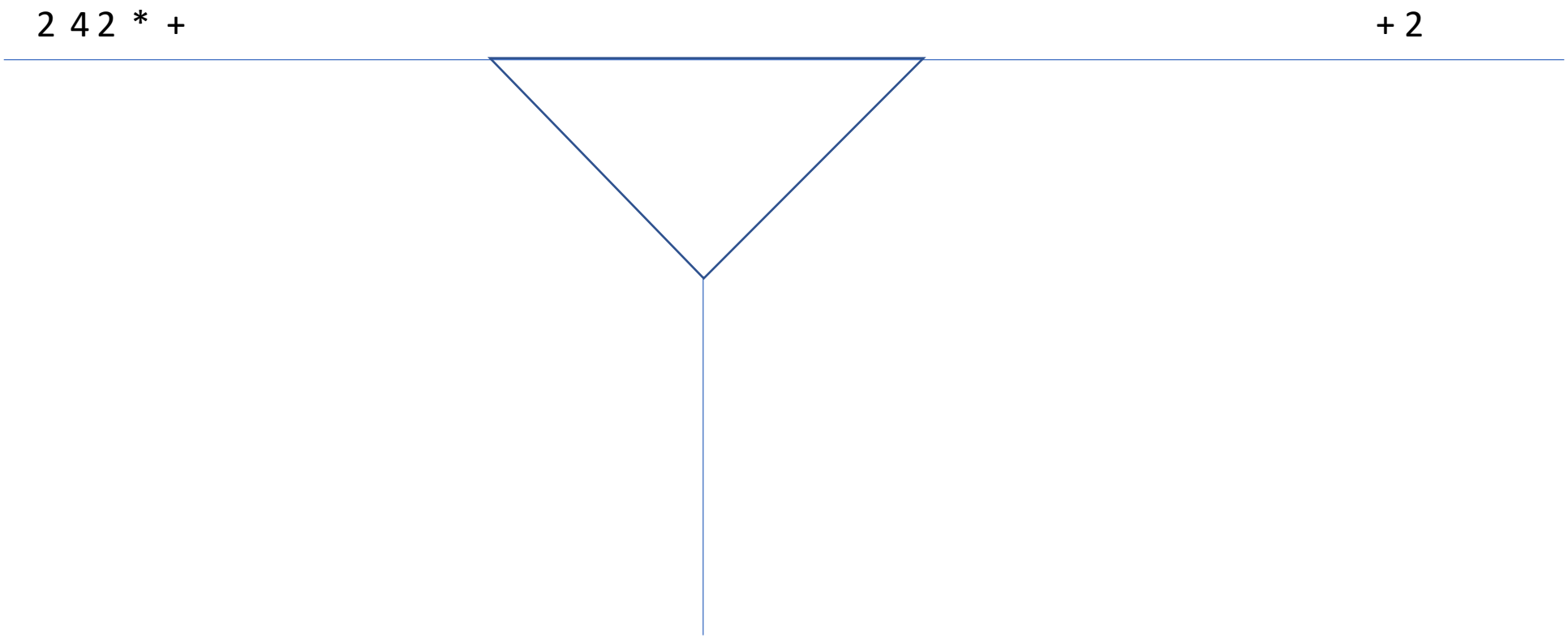
* Higher than +, * moves down



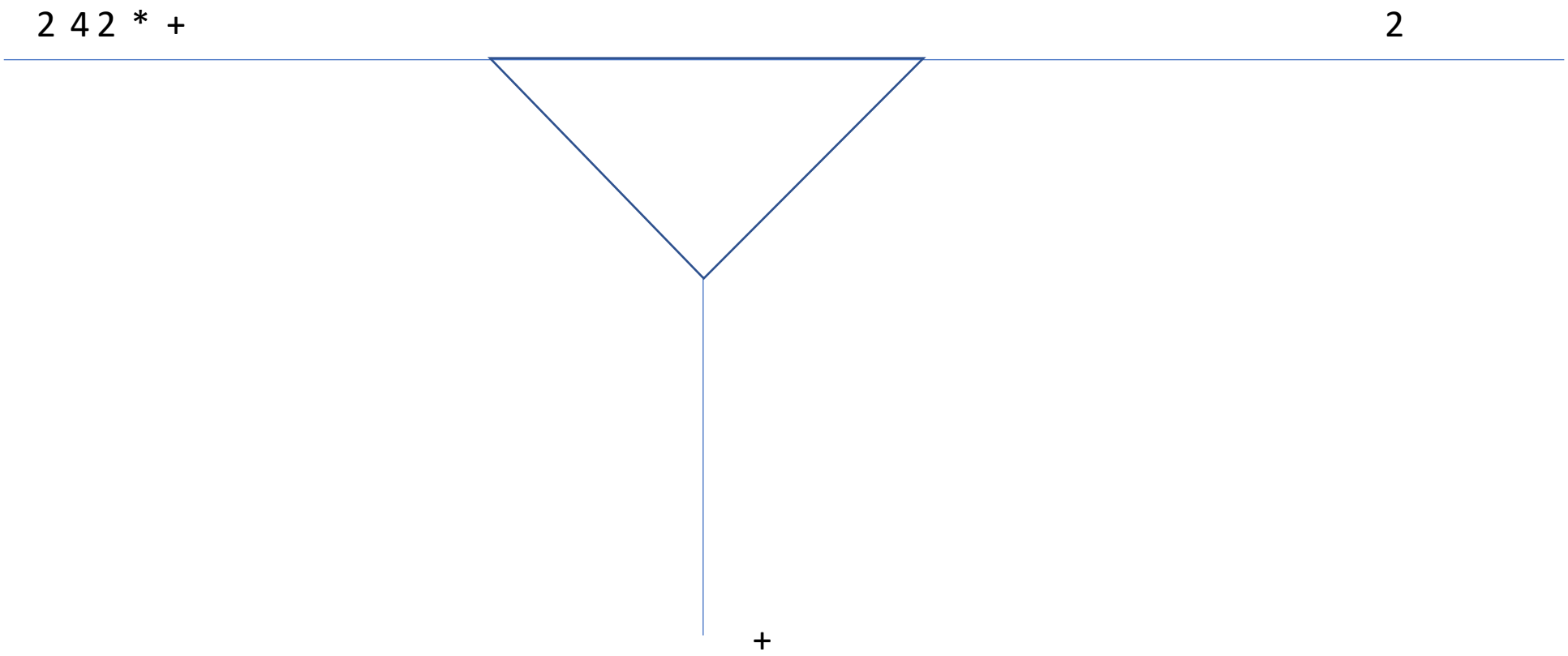
2 goes across



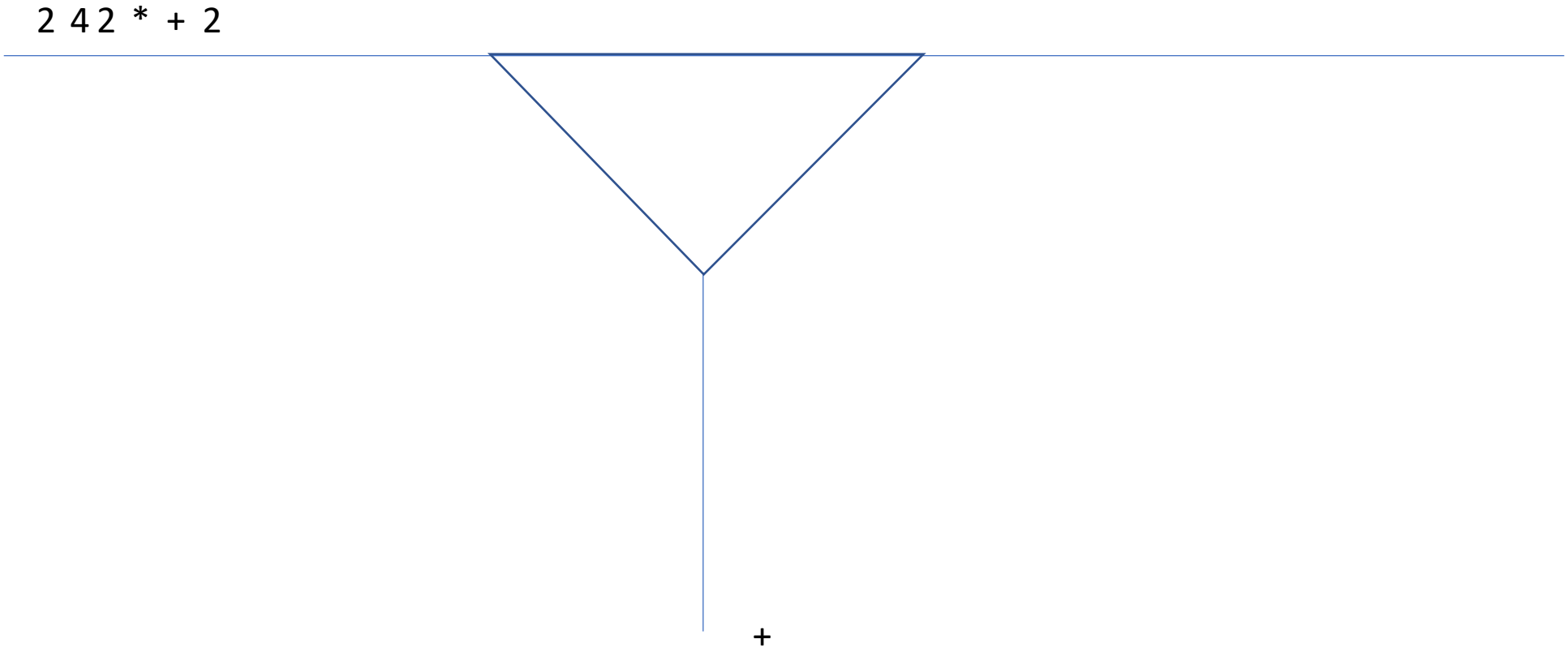
+ lower than *, * then + move across



Stack empty, + moves down

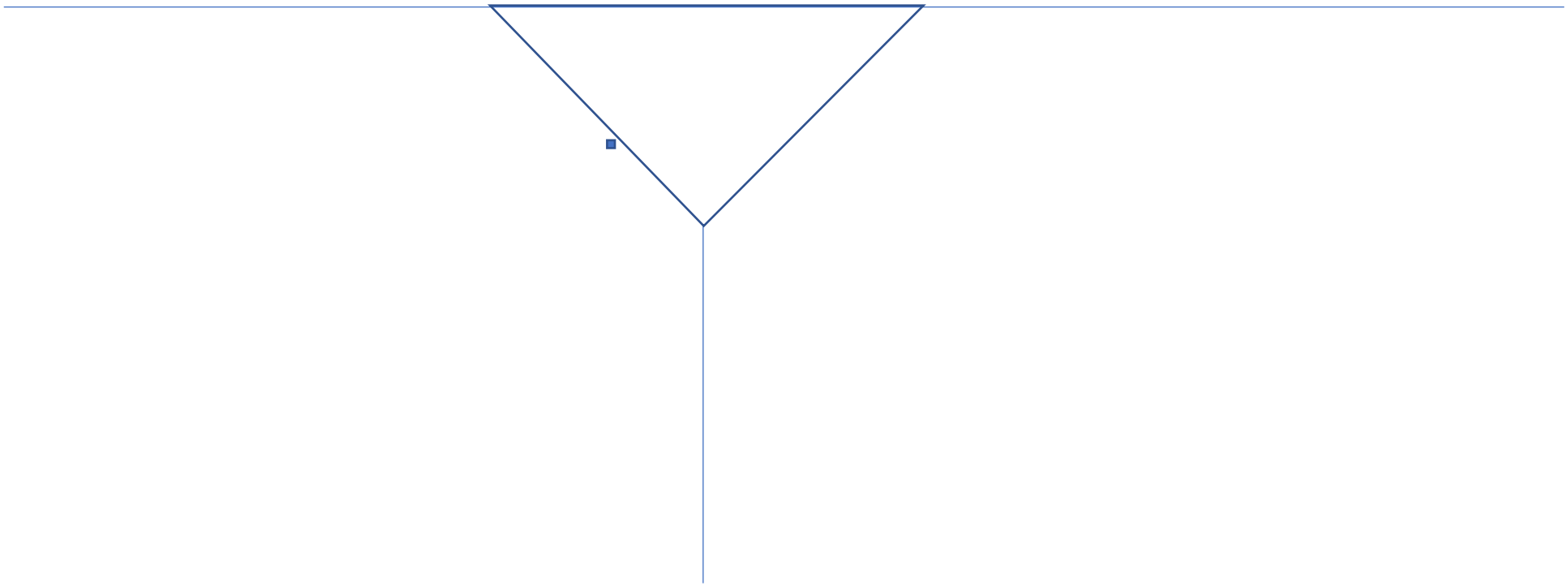


2 moves across



+ comes up

2 4 2 * + 2 +



Brackets in middle/end?

- 2+4*(2+2) becomes
- 2422+*+
- Anything in the brackets comes back up first