

Commutative property introduction



1 Same total either way — one fact gives two

Put out three red counters and five blue counters. Count them — eight. Build the equation with cards: $3 + 5 = 8$.

“Three red, five blue — eight altogether. Three plus five equals eight.”

Swap the two groups — blue on the left, red on the right — without adding or removing any counters. Count again: still eight. Build $5 + 3 = 8$.

“I swap the groups — no counters appear or disappear. Still eight. Five plus three equals eight.”

Name the property — the order of the addends does not change the whole. Three plus five and five plus three are related facts.

“The order of the addends does not change the whole. Three plus five and five plus three are related facts.”

One fact gives two — if you know $3 + 5 = 8$, you know $5 + 3 = 8$ for free; you do not calculate it again.

“Know three plus five? Then you know five plus three for free — you do not need to work it out.”

Choose the easier order — for $2 + 9$, count on from nine (two counts) rather than from two (nine counts). Same total, less work. Bound it: this is addition only — three minus eight is not the same as eight minus three.

“Two plus nine: start at nine, count on two — much less work. But careful — this works for adding only, not take-away.”

Commutative property — demonstration cards



Print on A4 (enlarge to A3). Hold up a fact and ask for the fact you get for free. Then show a swapped take-away and ask whether it can be true.

One fact gives another — say the pair for free

$$6 + 4 = 10$$

$$7 + 2 = 9$$

$$3 + 8 = 11$$

$$5 + 4 = 9$$

$$9 + 1 = 10$$

$$2 + 6 = 8$$

Take-away cannot be swapped — is this true?

$$8 - 3$$

$$3 - 8$$