



Positive & negative numbers

Direction from zero

- Today: use signed numbers for real situations — and say what zero means.

What does 0 mean here?

- A bank balance of \$0.
- A temperature of 0°C .
- An elevation of 0 feet.

Turn & talk: does 0 mean ‘nothing’ in these?

The sign is a **DIRECTION**

- + and – tell you which way from zero — not good vs bad, not big vs small.
- Zero is the agreed reference point: break-even, freezing, sea level, ground floor.

Money

- \$45 deposit $\rightarrow$ **+45**
- \$30 withdrawal $\rightarrow$ **-30**
- Balance of 0 = break-even, not 'no account'

Opposites

- The opposite of 7 is -7 — same distance from 0, other side.
- The opposite of -7 is 7.
- Take the opposite twice and you are back where you started.

‘Opposite’ is a reflection across 0.

Your turn

- A submarine is 120 m below sea level. Write its elevation.
- Thumbs up when you have it.

Careful: farther from zero $\neq$ bigger number

- -30 m and $+30$ m are the SAME distance from sea level.
- $+30$ is the greater number, but neither is farther from 0.

Distance from zero is its own question.

Now you

- → In-class practice sheet