



Rewriting expressions

Same value, different message

- Today: rewrite an expression so it tells you something new.

A price x rises by 5%

- Write the new price.

Turn & talk: $x + 0.05x$, or $1.05x$? Are they different?

Both. And they say different things

- $x + 0.05x$ shows the PROCESS: start, then add 5%.
- $1.05x$ shows the RESULT: the new price is 105% of the old.

Equal in value, unequal in meaning

- At $x = 200$ both give 210.
- Only $1.05x$ tells you '105% of the original' at a glance.

You rewrite to REVEAL something, not to tidy up.

Multipliers chain

- Up 10%, then up 10%: $1.1 \times 1.1 = 1.21$
- That is a 21% rise, not 20%.

Percents in sequence MULTIPLY. They do not add.

Your turn

- Write “x decreased by 20%” as one multiplication.
- Thumbs up when you have it.

Where the extra 1% lives

- $1.1 \times 1.1 = 1 + 0.1 + 0.1 + 0.01$
- The last bit is 10% OF the first 10%.

\$100 $\rightarrow$ \$110 $\rightarrow$ \$121. The extra dollar is the compounding.

Now you

- → In-class practice sheet