



Slope is a rate

How much y , per one x

- Today: slope, unit rate and why the order matters.

Rise over run

- Slope = change in $y \div$ change in x .
- Up 10 across 4 $\rightarrow 10/4 = 2.5$.

y first. Always. 4^{10} is a different number.

It IS the unit rate

- 2.5 means: 2.5 units of y for every 1 of x .
- £2.50 per kilo. 2.5 metres per second.

Slope and unit rate are the same idea in two languages.

Read the scale first

- One square is not always one unit.
- 6 squares up at 2 each is a rise of 12.

Count units, never squares.

Steeper = faster

- $y = 4x$ is steeper than $y = 3x$.
- 4 per unit against 3 per unit.

Comparing a table with a graph

- Table: 45 miles in 3 hours.
- Graph: 40 miles in 2 hours.

Reduce BOTH to per-one-hour first: 15 and 20.

Why $45 > 40$ is the wrong comparison

- Different amounts of time.
- Only the rates are comparable.

Your turn

- Find the slope through $(0,0)$ and $(3,12)$.
- Then compare with 45 miles in 3 hours.

y over x. Read the scale. Reduce to one.