

# Proportional Relationships Start Here

## Start from the learners actual reasoning

Teach learners to decide whether a whole relationship is proportional, connect a table to a rule and graph, and qualify a prediction. A correct per-one calculation for one pair is a foundation, not proof that every pair follows the same rule.

### Fit and preparation

A selected U.S. Grade 7 supplement for learners who name two quantities, scale equivalent ratios and interpret per one. Variables, coordinate order and the origin are introduced here. This is a progression from the Grade 6 ratio/unit-rate foundations, not a complete Grade 7 course. All numerical data and learner responses are constructed teaching examples.

- Read the teacher guide and prepare only the chosen student file. Ordinary paper, a pencil and the supplied coordinate grids are sufficient; no purchase, login or learner upload is required.
- If prerequisites are unclear, give Starting task before discussion. For ratio order or per-one meaning, use the unchanged foundation lesson and teacher guide in the ZIP's foundations folder. Keep those answers with the teacher.
- Teach Test the whole relationship, Connect table, rule and graph, then What a model does and does not establish. Each supplies a model and actual learner practice.
- Use Independent check after the taught sequence. Choose the response teaching from the explanation, then use the unused Follow-up check after another learning opportunity. Use Later transfer on a later occasion.

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## Choose the next teaching move

| What the work shows or leaves unclear                                     | Supplied next move                                                                |
|---------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Only one pair is checked; another displayed pair contradicts it           | Test every displayed pair: a model and different practice.                        |
| Equal increases are treated as enough; a nonzero start is ignored         | Check the starting value: compare totals, ratios and a zero-input pair.           |
| Quantity labels, coordinate order or the meaning of one are unclear       | Name the quantities and points; check the earlier per-one foundation if needed.   |
| Table, rule and points agree but explanation is thin                      | Connect your representations; ask for the meaning of the constant and the domain. |
| A finite table or a single point is treated as proof of every later value | One pair, two possible rules; compare claims and state the missing condition.     |

## Keep later evidence usable

Give only the selected student pages. Keep the teacher guide with you; set aside the later check and transfer pages until learners need them. A shown, rehearsed or helped task is practice, even when its file is called a check. The follow-up is different, not calibrated to equal difficulty. Record support and exposure rather than treating a short result as stable ability.

## Access and classroom use

Read-aloud, enlarged text, agreed oral or drawn responses and extra processing time can preserve the reasoning target. Use the numerical tables and point descriptions beside each visual. Supplying a classification, ratio, rule, point or next-step conclusion changes the evidence. Record what was supplied. Teachers may print and adapt these original materials under the site Terms of Use; retain Mentor Teaching attribution, identify changes and check Word print preview after editing. Keep learner notes locally under school procedures.