

Problem Solving relevance filter

How to separate the quantity that decides the answer from the realistic detail designed to occupy your attention.

THE SHORT ANSWER

UAT-UK names **Relevant Selection** as one of three Problem Solving types. Read the question before processing every number. Write the requested output, translate its constraints, then keep only data that can change that output. A number can be true, prominent and completely unnecessary.

Checked against the sources named in this guide, August 2026. British English. Free to share.

1 The problem often gives you too much on purpose

Real situations rarely arrive as a clean textbook exercise. TARA reflects that. Its Question Guide says Relevant Selection items include information that is unimportant, redundant or distracting. The skill is not merely arithmetic. It is deciding what the arithmetic should touch.

Use the five-step filter:

1. **Output:** write the noun and unit the question asks for.
2. **Constraint:** translate words such as *at least*, *remaining*, *before lunch* or *maximum*.
3. **Dependency:** ask what must change if the output changes.
4. **Select:** mark only the numbers and rules on that dependency path.
5. **Audit:** check that your answer is the requested quantity, not a nearby cost, total or percentage.

1 The tell

A price is not relevant merely because it has a pound sign. A date is not relevant merely because the problem includes a timetable. Relevance is a relationship with the question, not a visual property of the data.

2 Three statuses, not two

Do not label data only "use" or "ignore". Use three marks:

- **N, necessary:** removing it makes the answer impossible to determine.
- **C, check:** it may not enter the main calculation, but it checks a limit, unit or interpretation.
- **I, irrelevant:** changing it would not change the answer requested.

This prevents over-pruning. A capacity may be a final check even when it is not part of the first equation.

Question asks for...	Usually necessary	Often distracts
Revenue	quantities sold and sale prices	costs, wages and profit margin
Minimum journeys	load, capacity and delivery requirement	fuel price, colour and departure time
Earliest finish	task durations and dependencies	costs and unused resources
Share of a group	relevant counts and denominator	unrelated totals and averages

3 Worked example: count letters, not patients

Worked example A mailing with two filters

A clinic has 1,260 patients. Fifteen per cent have chosen email and receive no letter. Of the remaining patients, two-sevenths live in two-person households with another clinic patient; each such household receives one shared letter. Every other remaining patient receives one letter. Postage costs 85p per letter, the printer produces 32 letters per minute, and the office closes at 6 pm. How many letters are needed?

The output is a count of letters. Postage, printer speed and closing time cannot change that count, so they are irrelevant.

Patients needing postal contact:

$$1260 \times 0.85 = 1071.$$

Patients in two-person households:

$$1071 \times \frac{2}{7} = 306.$$

Those patients require half as many letters:

$$\frac{306}{2} = 153.$$

The other postal patients require one each:

$$1071 - 306 = 765.$$

Total letters:

$$153 + 765 = \boxed{918}.$$

Correct: The denominator changed from patients to households only for the paired group.

Trap: Using 1,071 gives every postal patient a separate letter. Using 765 forgets the shared-household letters entirely.

The realistic detail is not malicious decoration. It tests whether you preserve the output through two changes of grouping.

4 When crossing out is unsafe

Keep a number if it can act as a boundary. Suppose a van can carry 800 kg and your calculation produces a 760 kg load. Capacity did not generate 760, but it validates one journey. If the load were 840 kg, it would change the procedure.

Likewise, a timetable's lunch break may look narrative until the question asks whether a set of tasks fits before lunch. The right question is not "Have I used this number yet?" It is "Could changing this fact change the answer?"

2 Try it

Before solving five practice questions, copy only the requested output and the data you predict will matter. Solve from that extract. Then reopen the full stem and check what you wrongly kept or dropped.

5 Relevant Selection is only one problem type

UAT-UK names three Problem Solving types:

- **Relevant Selection:** choose the information needed and ignore distraction.
- **Finding Procedures:** build a sequence of operations for an unfamiliar problem.
- **Identifying Similarity:** recognise that two differently presented problems share a structure.

They can overlap. In the mailing example, selection removes price and speed, procedure separates email from post and then people from households, and similarity connects the problem to any setting where some individuals share one resource.

6 A 20-question repair drill

Use four sets of five questions.

1. **Set 1, untimed:** label every datum N, C or I before solving.
2. **Set 2, untimed:** write only the dependency chain, then calculate.
3. **Set 3, 10 minutes:** solve five mixed items and record any irrelevant number you used.
4. **Set 4, 10 minutes:** solve five more and record any necessary constraint you dropped.

Your error log needs two separate labels: *kept distraction* and *discarded constraint*. “Careless” hides which side of the filter failed.

7 The arithmetic floor

The official appendix assumes simple fractions, place value, percentages, the four operations, everyday calculations, mean, time, money, measures, basic area, perimeter and volume, and extracting information from tables and graphs. Complex fraction and decimal calculations are not required.

That modest list does not make the module easy. TARA can combine accessible arithmetic with unfamiliar rules, distracting information and a tight clock. Practise the basic operations until they leave attention free for selection.

8 Sources

UAT-UK, TARA Question Guide

The three Problem Solving types, the definition of Relevant Selection and the official mathematical appendix. [Read pages 11–18.](#)

UAT-UK, TARA Content Specification

Problem Solving as numerical reasoning in novel settings and the full assumed knowledge list. [Read the specification.](#)

The N/C/I filter and worked mailing problem are original study tools, not official terminology or recalled live content.