

LINEAR AND QUADRATIC INEQUALITIES: TEACHER INSTRUCTIONS

Objective

- To solve linear and quadratic inequalities.

Task Link

- parkermaths.com/y1ineq

Commentary

Students are typically less confident with this topic than some other quadratics topics from GCSE. Most are reasonably proficient with linear inequalities, but struggle to solve quadratic inequalities, often displaying poor written communication.

Students should be strongly encouraged to sketch the graphs as outline in the example-problem pairs in order to reduce errors.

Setting this task a couple of weeks before covering the discriminant allows students to have sufficient time to assimilate this skill before applying it to problems involving the discriminant.

Task Instructions

Part 1: Notes and Examples

Provide students with a copy of printed notes sheet (Linear and Quadratic Inequalities).

- Direct students to the 'task link' at the top of the sheet.

The task contains a sequence of four example-problem pairs. For each example, students should complete the following four-step process:

- Watch the example, adding any annotations the student finds useful.
- Attempt the paired problem.
- Check the solutions against the video.
- If the student has an incorrect answer, they should watch the remaining part of the video to correct their solution.

Part 2: DFM Key Skills

Note: The task below requires students to have a [Dr Frost Maths](#) account. Tutorials are available on the Dr Frost Maths site using the '?Get Help' buttons.

DFM key skills allow repeated practice of fine-grained skills using randomly generated questions. Upon entering an answer, students are provided with a detailed model solution. As the questions are randomly generated, students can continue practising until fluency is achieved.

Set the following [key skill](#):

- Solve quadratic inequalities of the form $ax^2 + bx + c > 0$ requiring rearrangement.

I use a success criteria of **4 out of the last 5 correct**.

I recommend using the 'flexible questions' option with the following settings:

Warn when Wrong:	Yes	?
Prevent Reattempts:	Yes	?
Require Working:	No	?
Require Videos:	No	?
Time Limit:	None	
Set:	Immediately	
Interleave Skills:	N/A	?
Hide skill name:	No	?
Completion:	Achieve a certain accuracy	
	4	5

out of the last questions correct on each chosen skill.

The progress of students can be checked in the DFM 'progress by class' interface.

Students can ask questions and feedback can also be provided on a question by question basis.

Extra Notes

Further information on flipped learning can be found in my [guide to flipped learning](#).

If have any questions or you try the task and have suggestions for improvement, please get in touch:

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