

SOLVING QUADRATIC EQUATIONS: TEACHER INSTRUCTIONS

Objective

- To solve quadratic equations by factorising, using the formula and directly using your calculator.

Task Link

- parkermaths.com/y1quadsolve

Commentary

Students typically have sufficient experience of solving quadratic equations from GCSE to do so successfully in most circumstances. However, some may have gaps in knowledge that will cause significant difficulties at A level.

Additionally, many students may not be proficient at solving quadratic equations directly using their calculator.

Setting this task for independent study means that it is unlikely that lesson time would need to be used to cover this topic.

Task Instructions

Part 1: Notes and Examples

Provide students with a copy of printed notes sheet (Solving Quadratic Equations).

- 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 a quadratic equation to get exact solutions.

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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