



If you have any questions about this please contact the [Teaching Organisation](#).

Here are your 3 pieces of feedback:

### Marker feedback for s1631442

There is evidence in the report of wide research of the educational background for this project. This has been briefly summarised and is set out clearly in the report.

The planning for this app was carried out thoroughly, with a sensible choice of React Native for the realisation and the integration of maths fonts; Asmita has outlined her system design choices very clearly in the report and the technical tools that she used to implement these. While it is clear from this report that there are apps available for teach yourself algebra, none follow the methods used by UK teachers in such a useful fashion and this is clear due to her background research of other apps and the interviews of teachers that are included in the report. The addition of the choice of both "balance" and "inverse" methods for solving equations mentioned in this report is of real benefit for UK teachers who use both methods and gives pupils a choice for themselves as commented in her final survey. Asmita was able to implement the changes suggested by the teachers on the first school visit, making good choice on what was feasible within the time limitations. Her final survey, although small was carried well carried out and written up clearly in the report. The bibliography is thorough and the whole report is clearly set out and finished to a high standard.

### Marker feedback for s1631442

This dissertation takes both the educational literature and the space of previous work seriously, which is good to see. It is a pity that the two aspects are not fully integrated; while many competing systems are described the evaluation of each is rather superficial. For example, several are said to be unsuited to classroom use, but analysis of what features of such an application make it suitable for classroom use are lacking; and in several places points are included under "disadvantages" that clearly are not disadvantages (e.g. for Math Papa a disadvantage is "Lessons seem to be following the 'Balance' method which is a method used in many British schools"!)

A complete functioning application has been developed and some testing has been done. There was a preliminary evaluation with teachers, producing some feedback which was acted on; the final evaluation was impacted by COVID-19 but nevertheless is better than nothing. Fuller evaluation would presumably have caused the correction of the odd horror like the confusion evident in Fig 1.3 between  $13/7x$  and  $13x/7$ .

The dissertation is long and detailed but is sometimes repetitive and unfortunately the detail is not very well chosen. Too much space is spent on describing the solution of routine programming issues, while key features are less well explained. For example, I was unsure what the "solitaire method" is - is there a connection with solitaire other than the use of draggable cards which can land in some places but not others (a feature shared with file explorers) for example? How exactly does the equation changer support multiplication of the equation and why is this a good way to do it? When the user enters an equation having no solution (4.10) and this is treated as an error, do you/could you support the user in

understanding what the problem is? This seems like an important teachable moment. What if the user enters an equation with infinitely many solutions, such as  $x = x$ ?

## feedback for s1631442

I agree with Perdita that the written document perhaps doesn't do complete justice to the quality of the app. But having read the document, I do think that Perdita's initial mark was a bit harsh, while Heather's was overly generous (I agree with Perdita that she was probably swayed by how enthusiastic the second teachers were and also by the student's work ethic). I think the agreed mark is about right. This is a highly competent piece of work, and it's very good and well designed in several respects.

That's all. If you believe something is missing please contact the ITO as linked above.