

## Optional Add-ons for the **mathsquad** homework program

Each of the following add-ons increase the benefits students could get out of the homework program, however they also come at some cost. Known benefits and costs of each add-on are included.



## Consequences for late/incomplete homework

### *Possible approach:*

**Date homework is due:** If a student is present and has not completed their homework they are required to stay back after class to unpack reasons why the homework was not completed and where necessary put a system in place so that there is not an ongoing issue. Also agree upon a reasonable time for the homework to be completed and when it will be submitted, and explain that if not submitted at this time a formal detention (either lunch time or after school as appropriate) will be issued. Document the follow up due date and communicated consequence somewhere easy to find, for example on your teacher documentation sheet. Offer to give students a new sheet/booklet if required, as if they don't have this there's no chance of them completing the homework by the following lesson.

**Follow up due date:** If homework is still not completed follow up with agreed upon consequence. If homework is completed then the student stays back after class to correct their work (if not possible correction can occur at another time, eg after school)

Contacting parents is a good idea if homework is not completed by the follow up date. A simple template is below:

*Dear XX,  
Unfortunately, XX has not completed this week's homework sheet. The work was due on XX and further support including giving him/her a new copy of the work and time to make a start on the sheet. The work has still not been submitted. The follow up consequence is now an after-school detention. This will take place on XX in room XXX.*

*Homework is a weekly task requiring students to give their best effort on questions covering a range of skills. Homework is due every XXX.*

*If you have any questions please don't hesitate to get in touch.*

*Kind regards,  
XX*

### *Benefits:*

Having consistent and appropriate consequences is likely to increase students' participation in the homework program and also gives you an opportunity to re-iterate the importance of doing weekly homework (improve retention and efficiency in which skills are recalled).

### *Costs:*

Time taken to carry out consequences.

### *Variations:*

If other teachers in the department have similar consequences for students then it might be possible to set up a "google doc" where teachers can list students' names and duration of detention allowing detentions to be run centrally. Note however, that this approach means that you won't be able to follow up with students regarding the reasons behind them not submitting their homework and also not allow you to put systems in place that support them in future.

## Teacher corrects homework

### Possible approach:

1. Print off solutions in a booklet for easy corrections.
2. Correct work, possibly using the below system to communicate level of correctness to students:
  - If students get something correct give it a tick. If they get it incorrect circle the question number, if they get it partially correct to put half a box around the number [

21. ✎ Substitute $x = 7$ into $9x - 39$ and evaluate.  $9 \times 6 - 39$ $= 54 - 39$ $= 15$ ✓	22. ✎ Solve the following:  $9 = 5x - 6$ $9 + 6 \div 5 = 3$	23 a. Expand $3(2x + 3)$  $6x + 3$ b. Factorise $6x + 8$  $6(x + 8)$
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3. Keep the following points in mind as you mark specific questions
  - Make sure that working is shown on any question that has a pencil (half marks if no working shown)
  - To get full marks on Q22 line by line working must be shown (the vertical line and inclusion of opposite operations on the left are optional, though often really helpful for students).

### Benefits:

Teachers can see what types of mistakes students are making and address these as a class. It also gives teachers an opportunity to make comments on students' skill work (often making a comment on the next week's sheet is a good strategy as that way they'll see it when they need it). If using the review lesson (see below) correcting students' work will play a key role in helping decide what skill(s) to focus on during the review.

### Costs:

Time taken (approx 45 minutes for 25 booklets each week)

### Variations:

Reap the benefits of student marking and teacher marking by alternating (perhaps at random) between the two approaches.

Teacher discusses solutions in detail while students are self-marking.

*Possible approach:*

The first few times that students mark their own homework go through the above correction tips in detail. Remind students to

- Pay attention to questions requiring working out
- Ensure all fractions are simplified

Also take the time to explain what “line by line” working is in terms of solving linear equations. The solution contains use of opposite operations, which while optional to include, can really help students with these types of questions.

*Benefits:*

Likely to increase quality of student work and perhaps also the number of skills that students can access.

*Costs:*

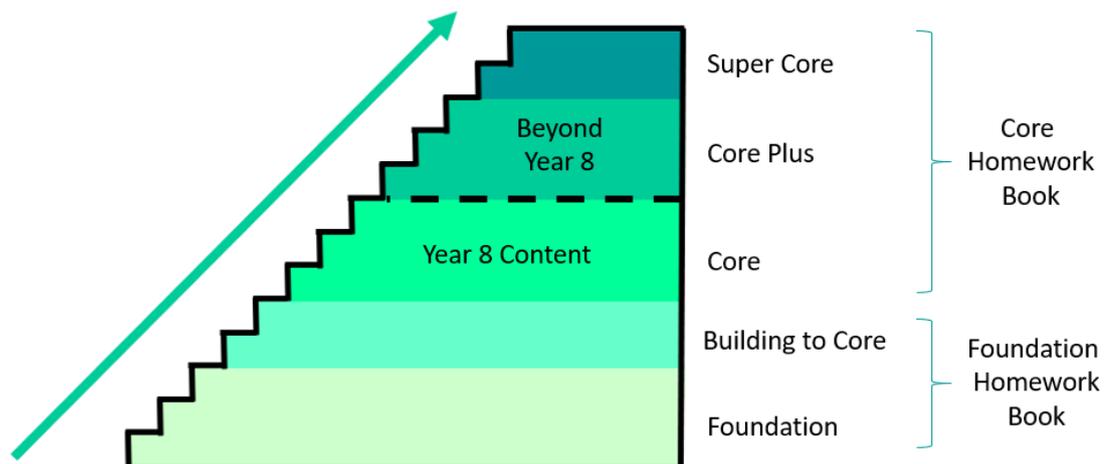
Time taken out of a lesson

## Differentiate homework

### Possible approach:

While the easiest way to implement the Homework Program is to have students work on Foundation level homework in Semester 1 and Core level homework in Semester 2, there is an option of having students “level up” at their own pace, that is, once they can regularly carry out all the skills within their current level. The following image shows how the Mathsquad Homework program can be broken into different levels.

## mathsquad levelling up



What does each level entail?

- Foundation: Students do all they can on the foundation sheet (this level can be further modified for students who can do less than 50% of skills by requesting that students do the times table questions on the left-hand side of the first page of homework too).
- Building to Core: Students do every second question on the foundation sheet (doing even numbered questions for even numbered sheets and odd numbered questions for odd numbered sheets, eg. Sheet 12 they would do questions 2, 4, 6, 8, .. etc and for Sheet 13 they'd do Q1, 3, 5, 7, etc). Students also complete the 12 Core level questions on the left-hand side of the second page of the homework.
- Core: Students do all they can on the core sheet (this level can be further modified for students who can do less than 50% of skills by requesting that students do the Foundation level questions on the left-hand side of the first page of homework too).
- Core Plus: Students do every second core questions (in the same way as building to core) and also attempt the Core Plus questions on the left-hand side of the second page of homework.
- Super Core: Students operate like they have done in Core Plus, though are required to do an additional challenge question, perhaps taken from a past [Australian Maths Competition Paper](#).

### Benefits:

Students are motivated to learn by the “levelling up” and gamification nature of this approach. Differentiation is done inclusively as all students are skill working through homework booklets that have the same structure. Attention isn't unnecessarily drawn to students working well ahead or behind the majority. Students are completing work that is at an appropriately challenging level for them.

### Costs:

Time taken to ensure students are working on the correct level. Extra time taken preparing and printing booklets. Time taken to go through the solutions at multiple levels if marking as a class, though students can work independently on a quiet task. For example, students can be given a collection of worded questions at the beginning of the lesson and work on these independently when not correcting their homework. Once all corrections are done students can share the strategies they used for solving the problems.

## Use of Awesomeness Tracker

The Awesomeness Tracker is a grid that give students space to document their progress once they have their homework sheet corrected.

### Possible approach:

1. Download the Awesomeness Tracker Sheets (found within the webpage <http://mathsquad.org/Year-8-Homework/>)
2. Print out Awesomeness Tracker out one per student (recommend: printing in colour, on coloured A4 paper so it is easy for students to find)
3. The Awesomeness tracker can be used once students have access to their corrected homework sheet. They fill in the Awesomeness Tracker using a highlighter as shown in the example below. The Awesomeness Tracker can be completed weekly or every few weeks by filling in data from multiple sheets at one time.

### awesomeness tracker term 1

Found Skill #	Book 1										Found Pretest	Core Pretest	Progress Test	Core Skill #	
	1	2	3	4	5	6	7	8	9	10					
TT															F01
F01															F02
F02															F03
F03															F04
F04															F09
F05															F10
F06															F11
F07															F12
F08															F21/22
F09															F24
F10															F26
F11															C01
F12															C02
F13															C03
F14															C04
F15															C05
F16															C06
F17															C07
F18															C08
F19															C09
F20															C10
F21															C11
F22															C12
F23															C13
F24															C14
F25															C15
F26															C16
F27															C17
F28															C18
F29															C19
F30															C20
F31															C21
F32															C22
C1															C23
C2															C24
C3															C25
C4															C26
C14															C27
C15															C28
C18															C29
C19															C30
C25															C31
C27															C32
C29															C+1
															C+2
															C+3
															C+4
															C+5
															C+6

### Benefits:

By using the Awesomeness Tracker students have access to a visual representation of their progress and this acts as an excellent motivator for students to put effort into their learning. The visual representation of what skills are known and what skills need work is also helpful for students and teachers and becomes more valuable once multiple sheets have been recorded and patterns can be seen. Use of the Awesomeness Tracker is also really valuable if there is a regular lesson where students are able to guide their own learning as students can see where their gaps are and make informed choices as to what skill they wish to focus on.

### Costs:

The cost of using the Awesomeness Tracker is that it does take time. I would also recommend not introducing the Awesomeness Tracker until Book 1A is complete as students will learn how to use the Awesomeness Tracker more easily if filling in more than one sheet at a time.

### Introduce a regular review lesson

#### *Possible approach:*

While a number of skills covered within the homework sheet are likely to be covered in the upcoming topics, there will be some skills which either won't be covered or have been covered but, in general, students are still have trouble with. A review lesson would involve the teacher allocating some period of time to addressing these gaps in student knowledge, say 20 minutes on a weekly basis. During this time it is likely that the teacher would cover some key examples and give students time for some focused practice.

#### *Benefits:*

Students have a much-needed additional opportunity to learn skills.

#### *Costs:*

Time taken out of regular program, students who already know the skill may become frustrated with the repetition

## Introduce assessments

### *Possible approach:*

Select a sheet at random and have the students complete the sheet under test conditions at the beginning of the year as a pretest and then on a termly basis. It is recommended that students do a Foundation and Core level pretest at the start of the year and then complete a termly assessment at the level which they are working at through the homework program.

### *Benefits:*

This will allow you to see exactly what students can do when working independently. Furthermore, this is likely to motivate students to put effort into their learning (especially if they are getting assistance when completing their homework see FAQ for more information on this). Completing formal assessments also allows teachers to track progress, celebrate growth and possibly put measures in place for students who haven't progressed

### *Costs:*

Time taken away from regular program