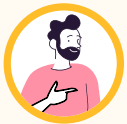


# IBDP Maths

## Teacher to Teacher Tips

Kognity is designed to help you prepare your students for success in their studies, while saving you time in the process. We have taken some of the most frequently asked questions from IBDP Maths teachers and asked other IBDP Maths teachers to provide the answers to them. Explore them below!



### How can I use the book to teach the Maths Toolkit skills?

Within Kognity Maths you will find various activities. These can be used in class or for homework for practice short investigations. You can have students present their findings to the class by presenting their work in written form on a whiteboard or giving an oral explanation. Otherwise, have students write a short report.

You will also find investigations throughout Kognity Maths. These can be used for more extensive and open-ended problem solving. Students can present their findings in written form to practice the math communication skills.

4.3 Measures of central tendency and dispersion

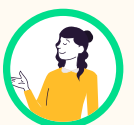
### Investigation

0/1 Students have completed this section

Create assignment

Here's a problem-solving challenge you can do with a friend.

1. Create a set of data, with or without frequencies depending on the level of challenge you want.
2. Calculate the mean and standard deviation of the set and check your values with the GDC.
3. Roll dice, use a random number generator, or have a friend choose a new mean and standard deviation for you to use as your target.
4. Transform your set of data by adding, subtracting, multiplying or dividing the set by constants until the mean and standard deviation equal the target.
5. You and a friend can make it a game to see who can work it out faster or who can come up with the most original ways to reach the target.





## How do I use Kognity Maths to create effective formative assessments?

You can do this in a variety of ways! You can issue practice quizzes by using question assignments for particular subtopics, which allows students to see feedback right away. As a teacher, you can then use class assignment data to see which concepts need additional work. You can also issue exam style questions with the mark scheme visible and have students mark their own work!



## How can exam style questions be used to prepare for Paper 1 and Paper 2?

The exam style questions can be used both formatively and summatively.

Formative assessment:

- You can create exam style assignments and allow students to see the markscheme, which they can use to mark their own work
- You can create exam style assignments and hide the markscheme. Students can then submit their written work that you can mark. The feedback can be used as a formative assessment!

Summative assessment:

- You can create exam style assignments and hide the markscheme. Students can submit their written work and you can mark it using the provided solutions.

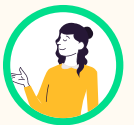
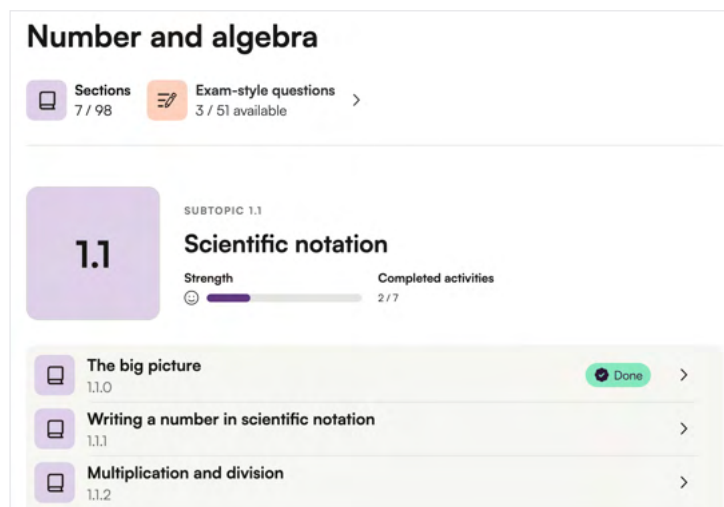
1. Number and algebra					Add exam-style question	
51 questions						
Add	Sent	Question	Paper	Marks		
<input type="checkbox"/>	<input checked="" type="checkbox"/>	(a) Prove that $\log_2 3$ is an irrational number. [4 marks]	1	4	Q	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	(a) Solve $\log_2 (k + 2) - \log_2 (3 - k) = -2$ . [5 marks]	1	5	Q	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Let $a_1, a_2, a_3, \dots$ be an arithmetic sequence with $a_1 = 20$ , $d = -3$ . (a) Find $a_4$ , the 4th term. [2 marks] (b) Find $S_4, \dots$	2	7	Q	





## How can I encourage students to take ownership over their own learning?

With students, you can discuss the progress markers and strength bars in the book. These show students how much of the book they have completed and encourage them to revisit sections that they have not mastered or visited recently.



## How do I use Kognity Maths for effective review before the exams?

This can be done in a few ways!

Reviewing topics:

- Have students identify areas of weakness from past topics using the strength bar. Provide time for students to read the sections for the identified subtopics and to do additional practice.
- Reteach or review subtopics that many students identified as an area for work.

#### Practising-

- Have students do strength battles. This will allow them to review skills from each of the 5 class topics and to practice working under time pressure.
- Create Exam Style assignments and allow students to see the markscheme and mark their own work.
- Create question assignments for a specific topic or a wide range of topics (depending on what you want to review).

#### Calculator-

- Use the Calculator Support section in [0.1.3](#) to review the important calculator skills systematically. You can assign a few skills to each student to present to the class with an example.

