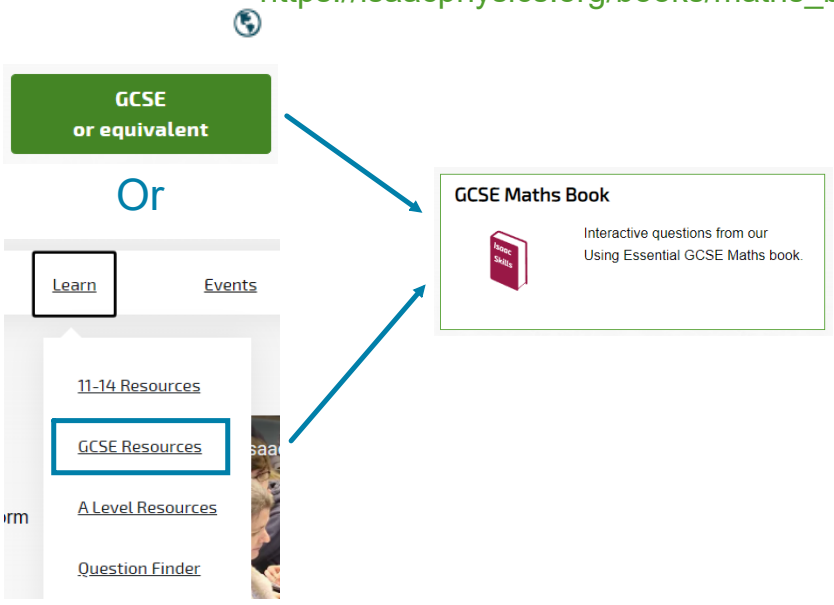
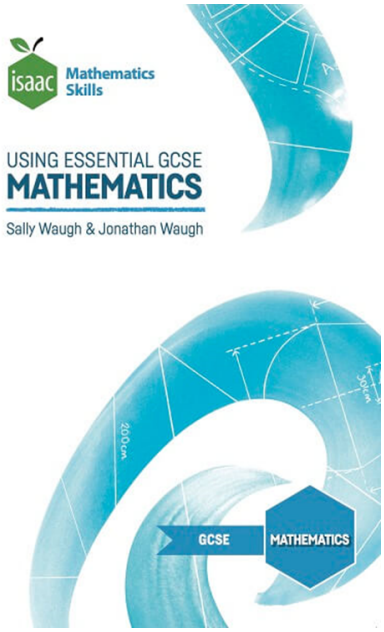
Isaac Maths Resources

GCSE Book	https://isaacphysics.org/books/maths_book_gcse
A-level Book	https://isaacphysics.org/books/pre_uni_maths_2e
Practise Maths	https://isaacphysics.org/pages/maths_practice
Revision Boards	https://isaacphysics.org/pages/maths_practice#master_maths
Question finder	https://isaacphysics.org/questions
Concept Pages	https://isaacphysics.org/concepts
Questions to try	https://isaacphysics.org/gameboards#tcpd_newtoisaac_maths4

GCSE Book

https://isaacphysics.org/books/maths_book_gcse





Available for £1.50 in print, or online for free.

Buy the book

Printed copies, cost price £1.50 (plus p+p)

Buy Isaac Books

Teacher resources.

For Teachers

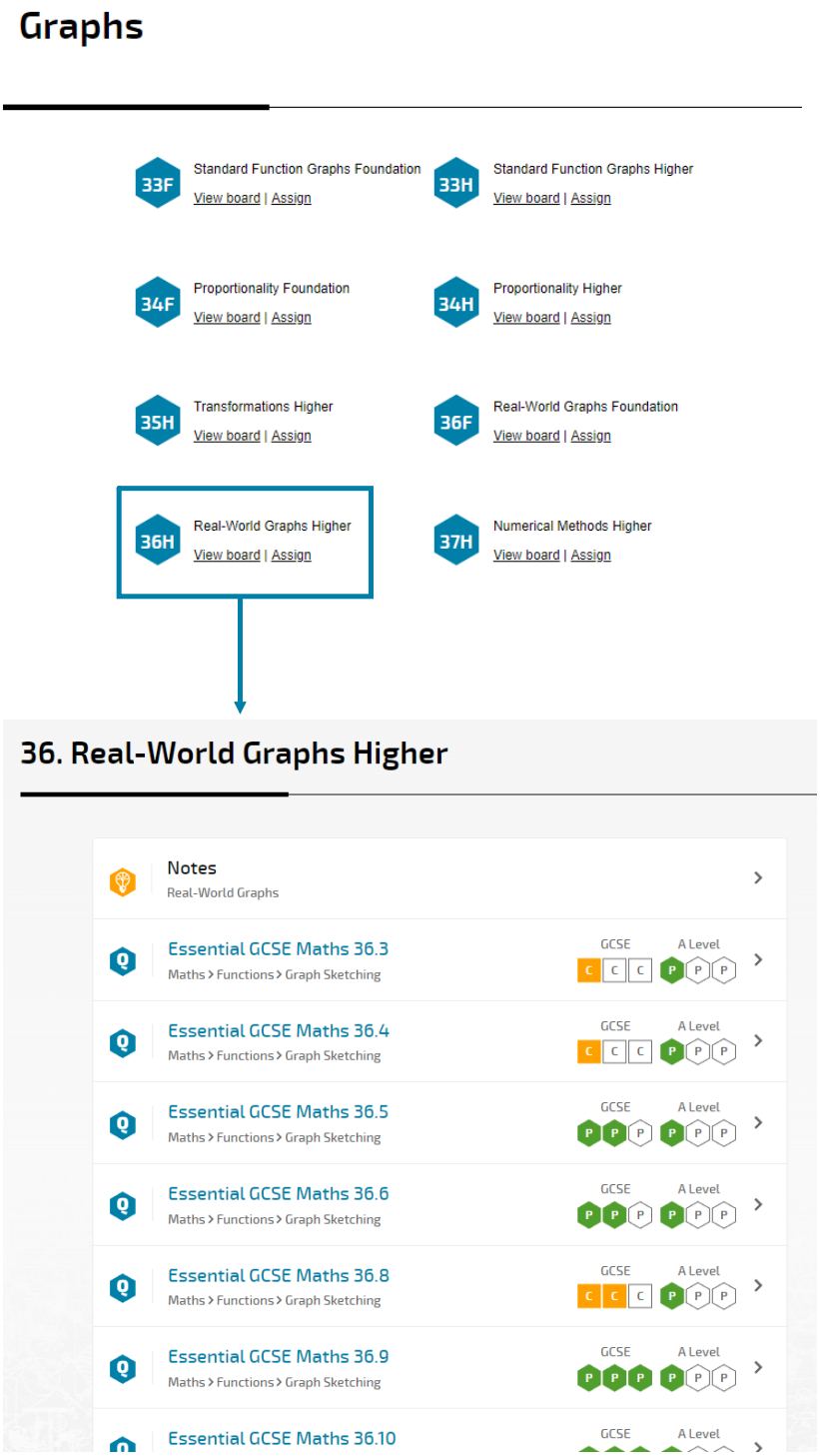
Specification Table - maps the book to your exam board.
Teacher's Manual - authors' notes for teachers.
Preparation for Sixth Form (pdf) - by the authors.
STEM Question Finder - table of problems that relate to STEM subjects.
Maths Skills for GCSE Science - table of assumed skills for GCSE science courses.

Covers all of GCSE Maths, with sections for Foundation or Higher.

Chapters:

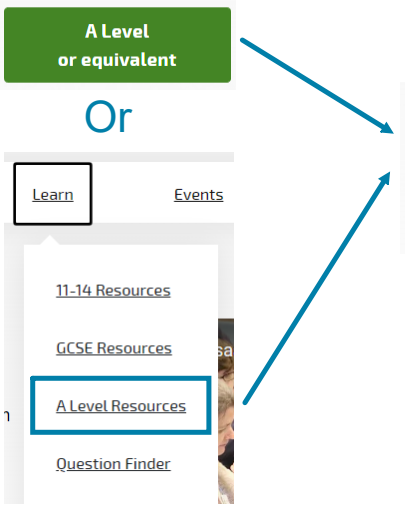
1. Solving Maths Problems (Section 1)
2. Skills (Sections 2-11)
3. Algebra (Sections 12-22)
4. Linear Functions (Sections 23-25)
5. Quadratic Functions (Sections 26-30)
6. Inequalities (Sections 31-32)
7. Graphs (Sections 33-37)
8. Geometry (Sections 38-50)
9. Probability and Statistics (Sections 51-57)

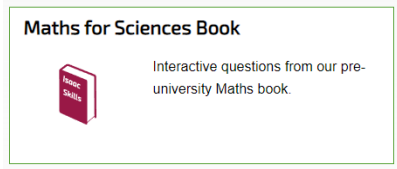
Questions in gameboards for each chapter.

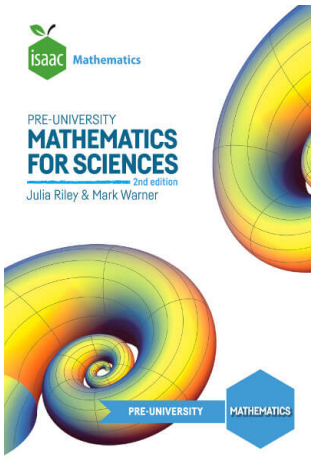


A-level Book

https://isaacphysics.org/books/pre_uni_maths_2e







2nd edition!

Available for £1.50 in print, or online for free.

Buy the book

Printed copies of the book can be purchased at cost price for £1.50 (plus p+p).

Buy Isaac Books

Specification table for teachers

For Teachers

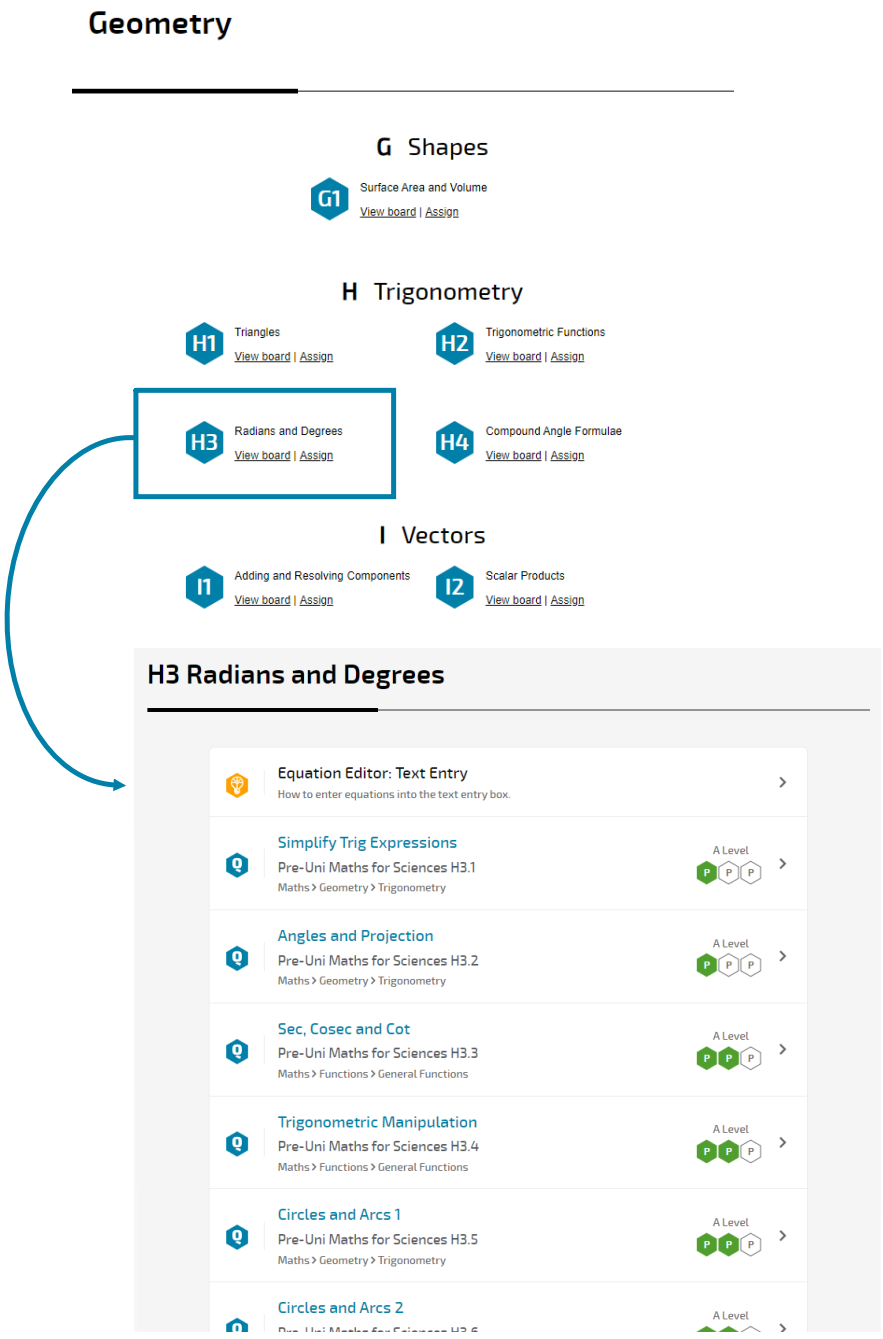
Specification Table - maps the book to your exam board.

Covers pure content for A-level Maths, and some of Further Maths.
Focuses on mathematical methods used in the sciences.

Chapters:

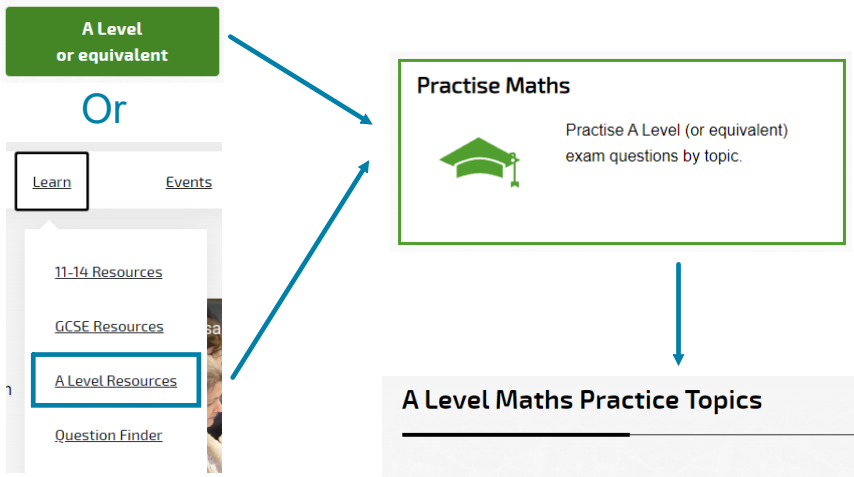
1. Algebra & Number (Sections A-D)
2. Functions (Sections E-F)
3. Geometry (Sections G-I)
4. Calculus (Sections J-L)
5. Applications to Sciences (Sections M-T)

Questions in gameboards for each chapter.



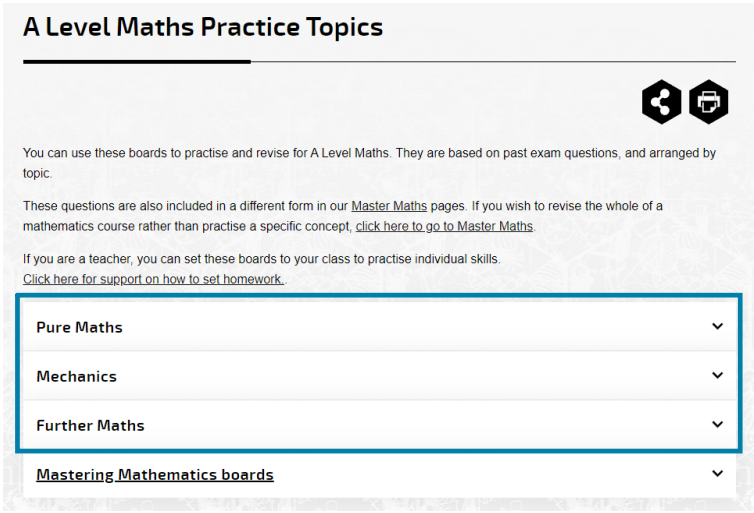
Practise Maths

https://isaacphysics.org/pages/maths_practice



Over 1000 past exam questions, arranged by topic

Ideal for practising a specific topic

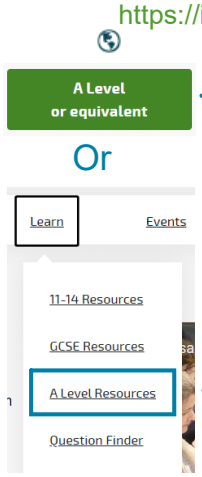


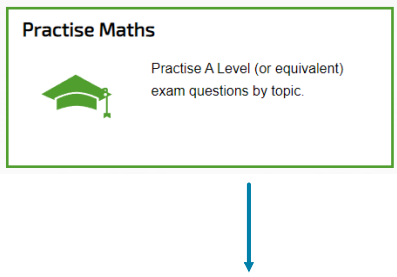
Stage 2 (Year 13)

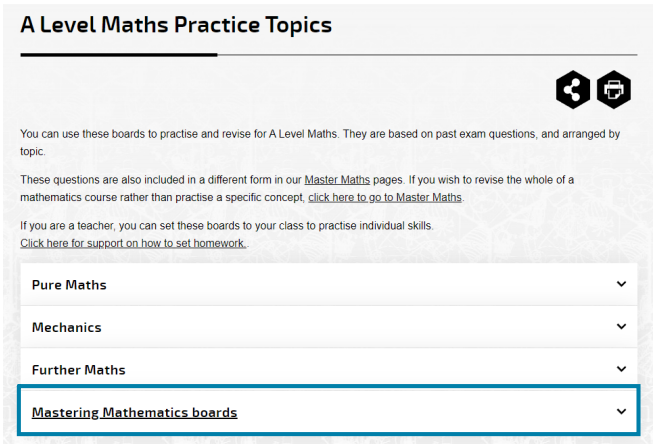
Field	Topic	Board
Algebra and functions	Algebraic Division	Link
	Curve Sketching and Combined Transformations	Link
	Functions and Algebra	Link
	Functions: Graphs and Inverse Functions	Link
	Modulus	Link
	Partial Fractions	Link
	Graphs and roots in context	Link
Coordinate geometry	Parametric equations	Link
Differentiation	Constructing Differential Equations	Link
	Differentiation and Gradients: Beyond Polynomials	Link
	Differentiation: Chain Rule	Link
	Differentiation: Implicit	Link
	Differentiation: Products	Link
	Differentiation: Quotients	Link
	Differentiation: Synoptic Problems	Link
Integration	Area Between Two Curves	Link
	Integration by Parts	Link
	Integration by Substitution	Link
	Integration by substitution (trig)	Link
	Integration: General	Link

Revision Boards

https://isaacphysics.org/pages/maths_practice#master_maths





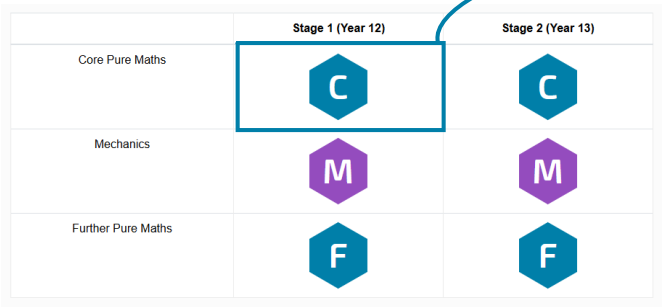


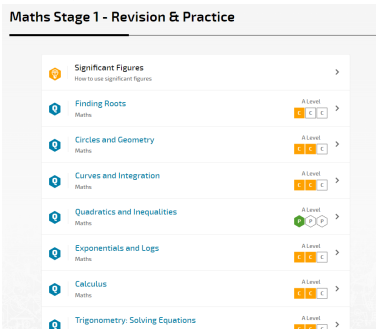
Past exam questions that span A-level

Linked to easier questions

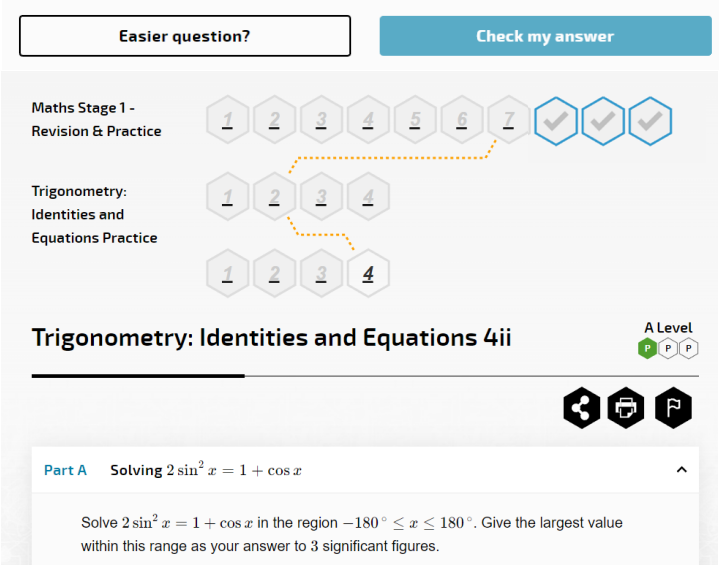
Ideal for revision

Each board spans the syllabus





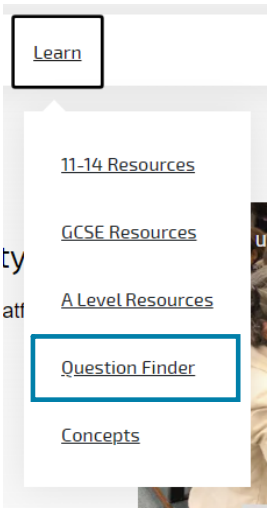
Each question part links to an easier question on the same topic



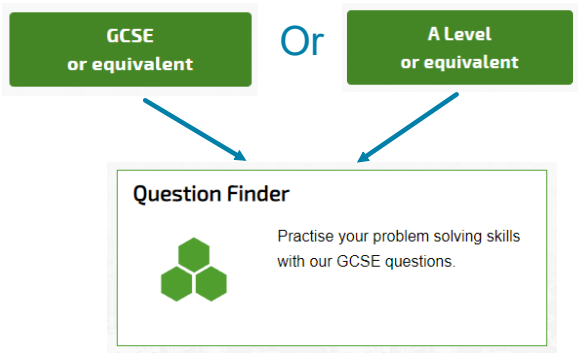
Hexagons will update to show progress

Question Finder

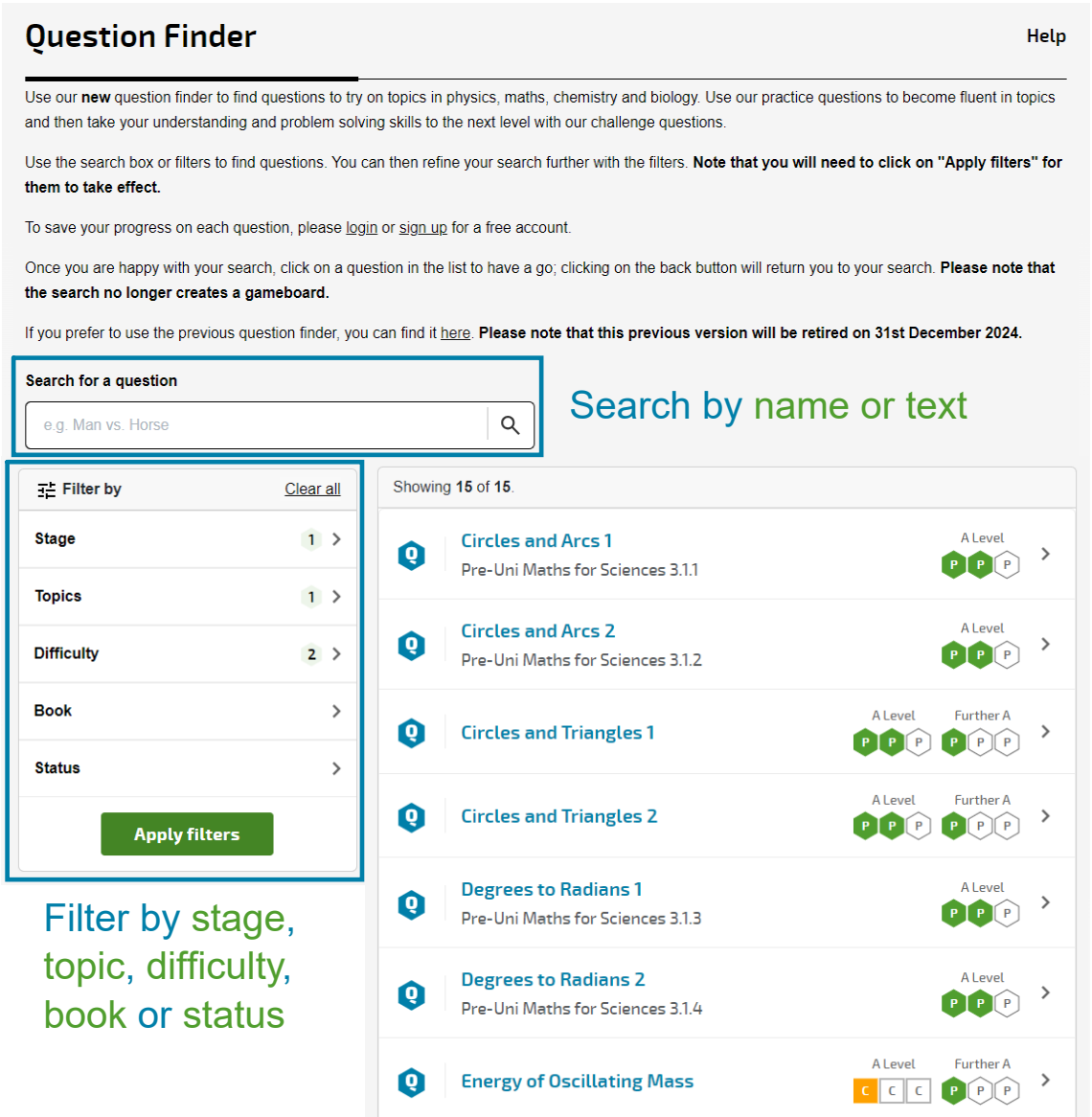
https://isaacphysics.org/questions



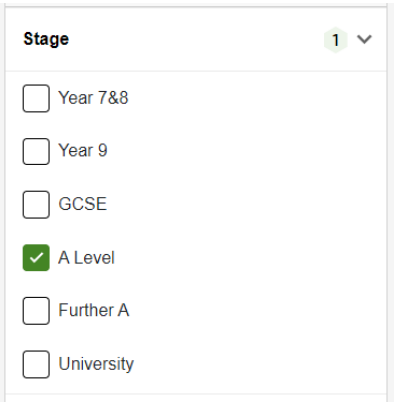
Or



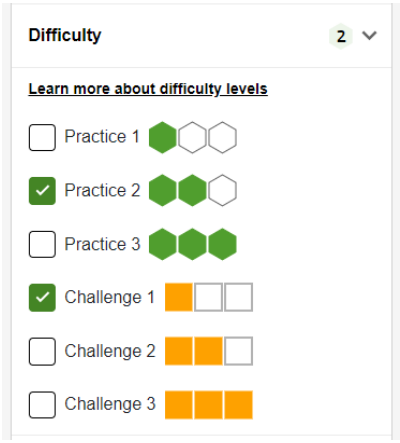
Search for questions by stage, topic or difficulty.



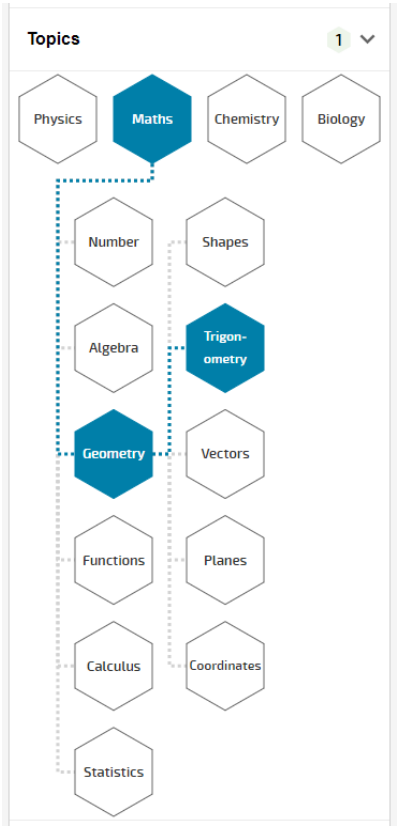
Stage



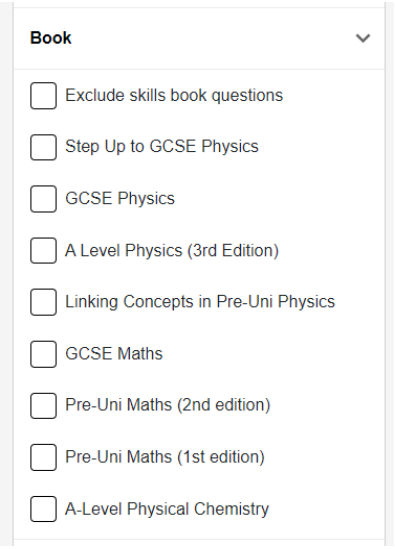
Difficulty



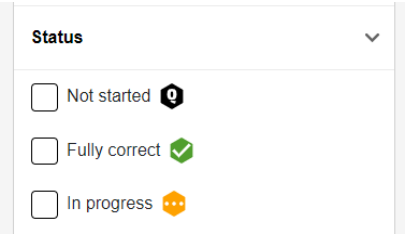
Topic



Book

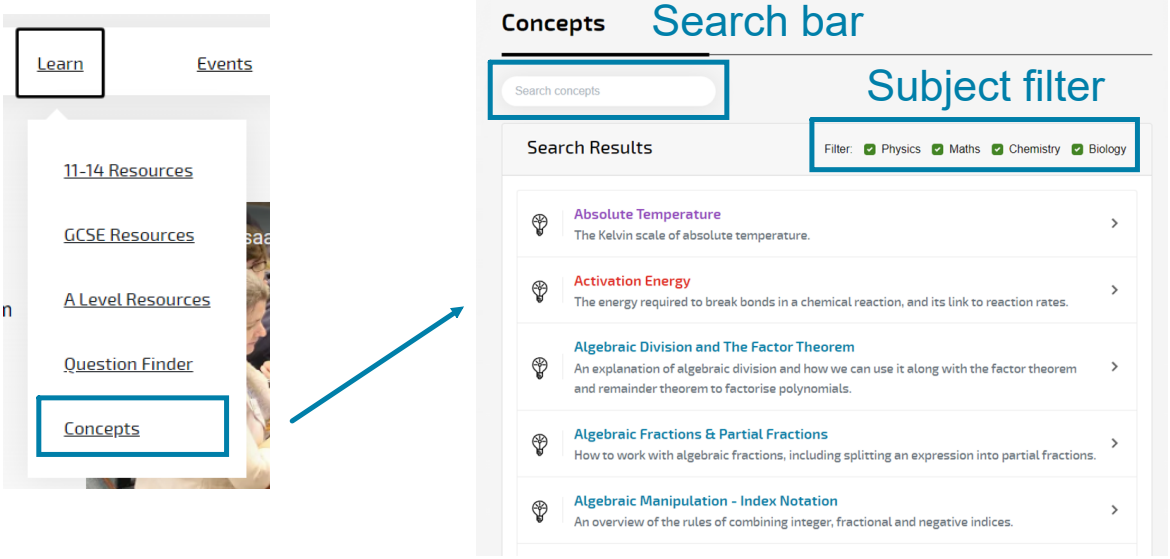


Status

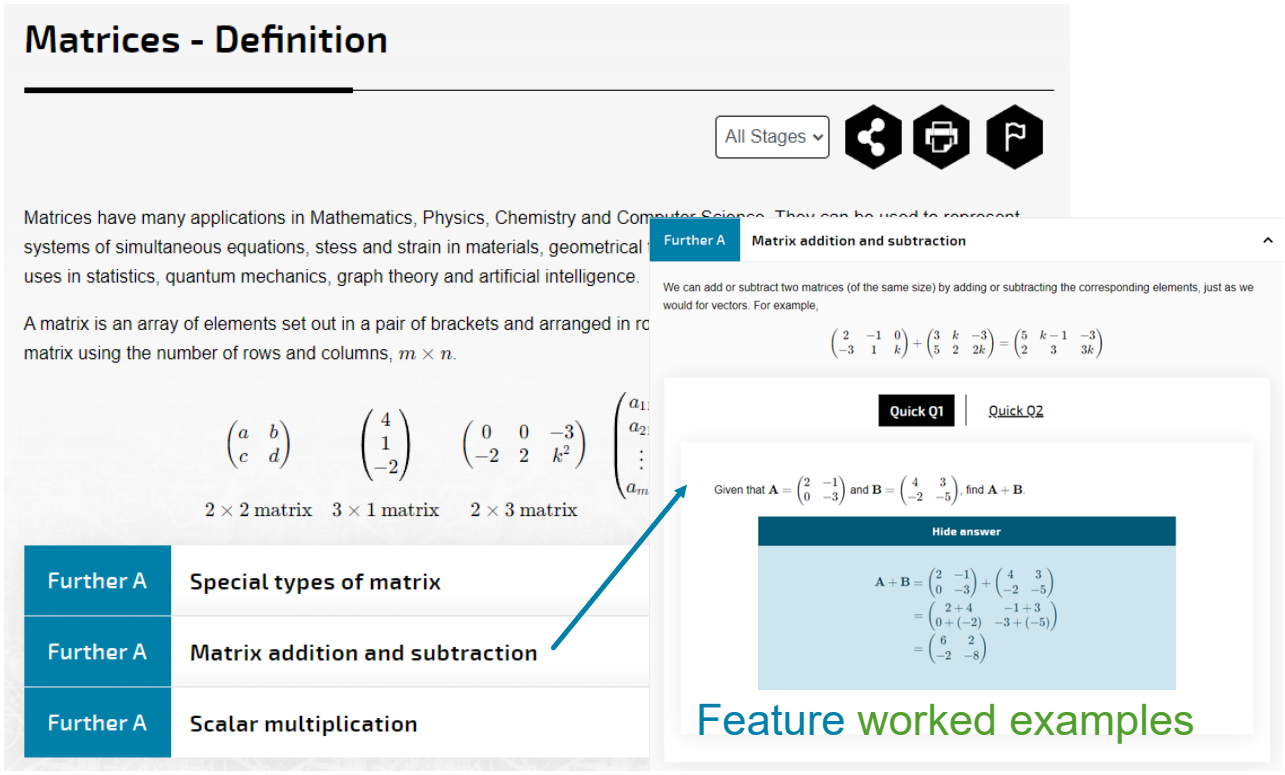


Concept Pages

https://isaacphysics.org/concepts



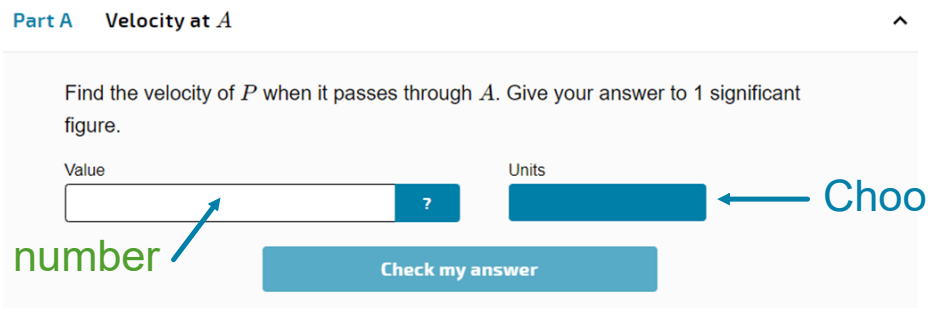
Concepts pages explain a concept in detail.



Question Types

There are many different types of questions available on Isaac Physics. Here are some examples of different types.

Numeric Questions

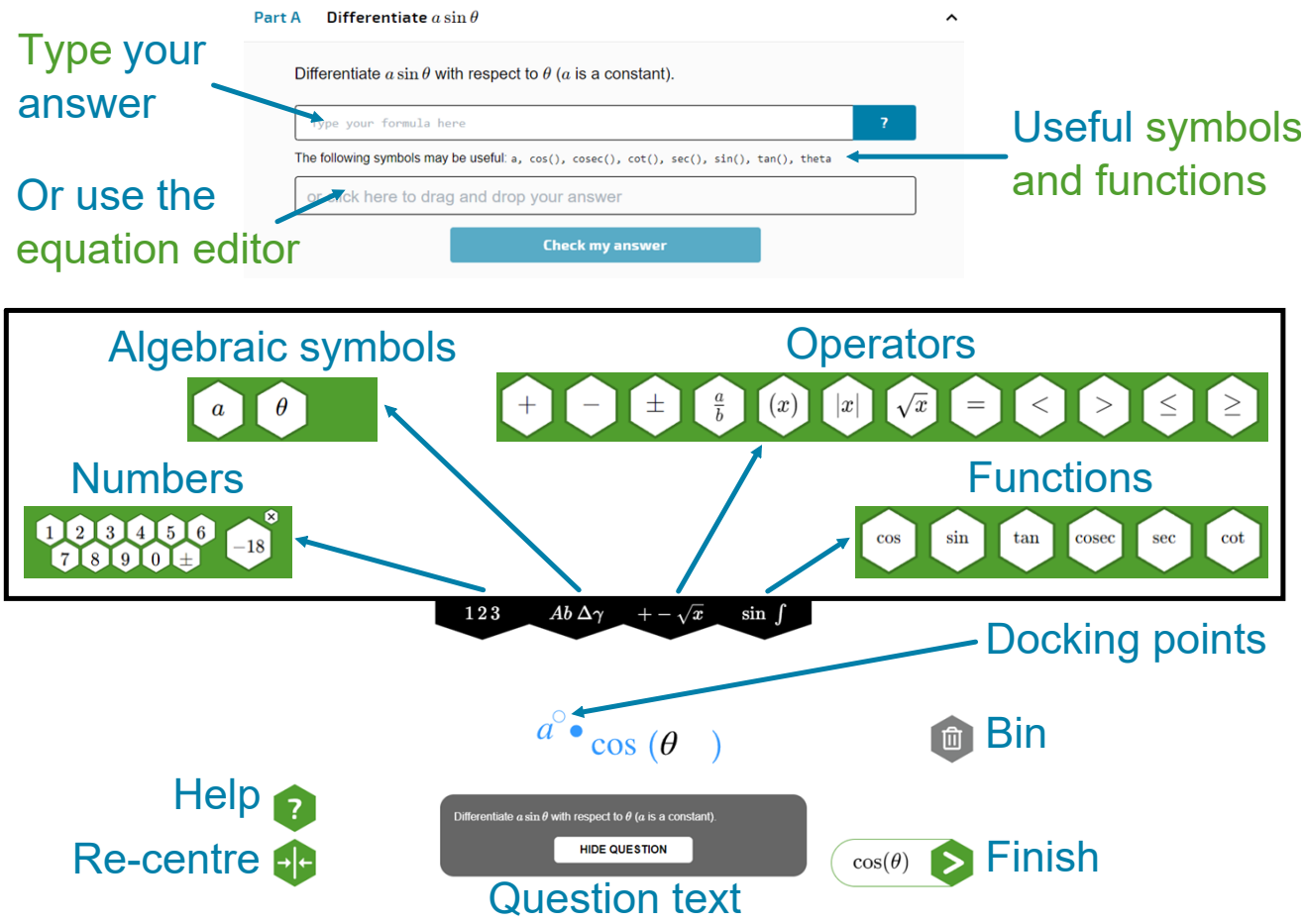


Choose a unit

Enter a number

These will check answers for appropriate use of significant figures.

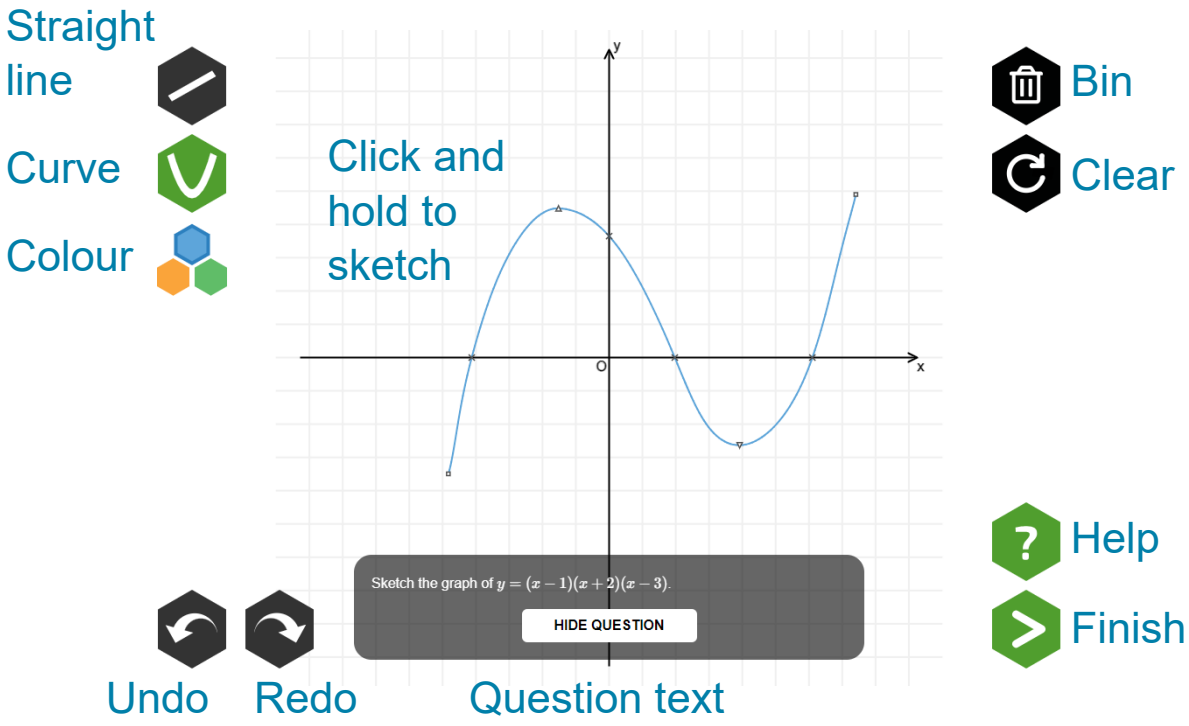
Symbolic Questions



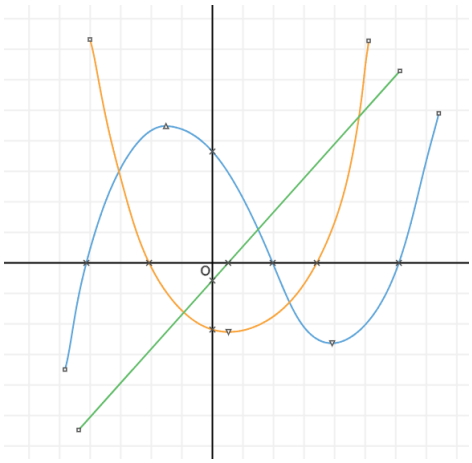
Graph Sketcher Questions

https://isaacphysics.org/questions/cubic_modulus

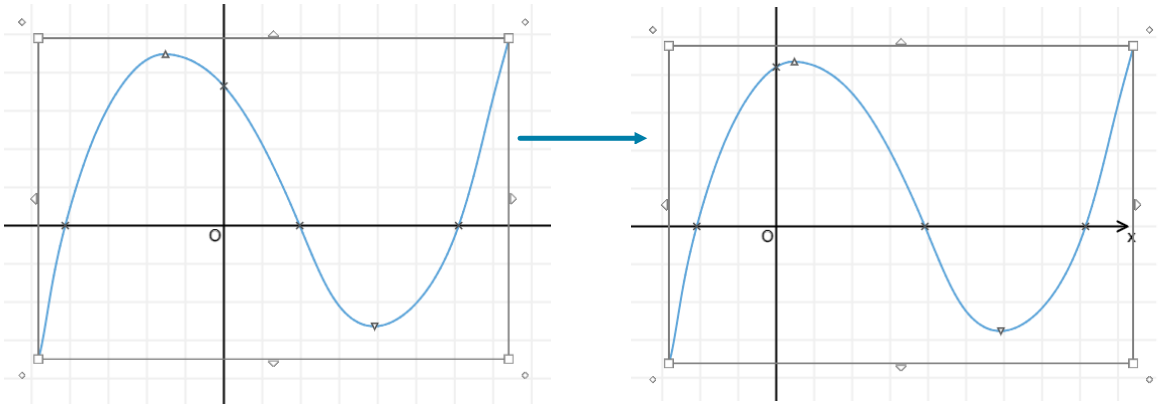
Click on the grid to start:



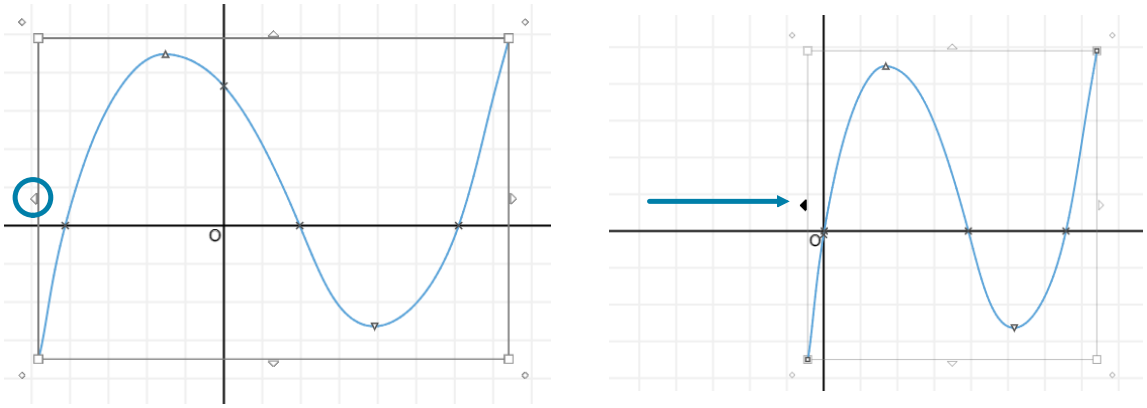
You can draw up to 3 strokes (usually):



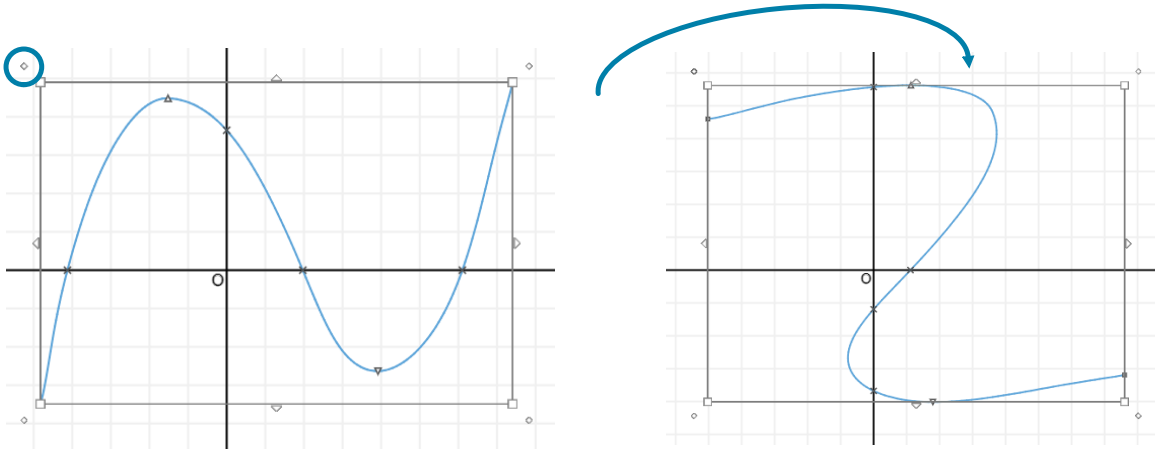
You can move a stroke by clicking and dragging.



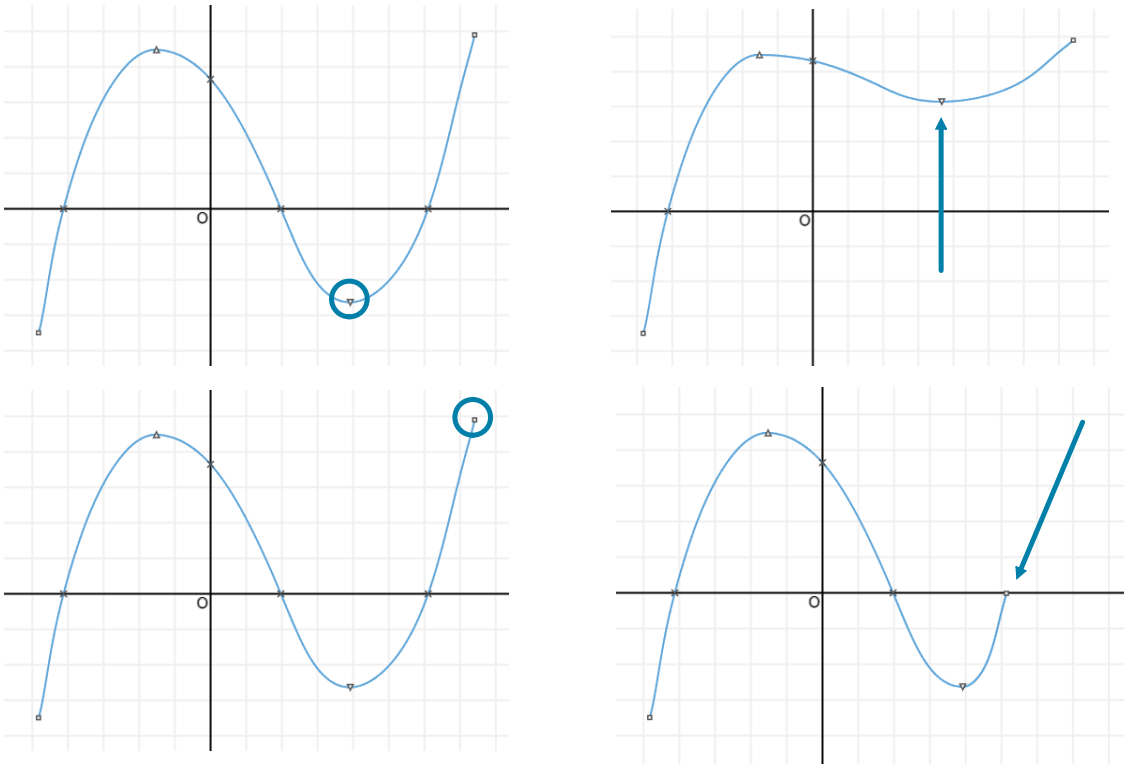
You can stretch it by dragging the edge of the selection box.



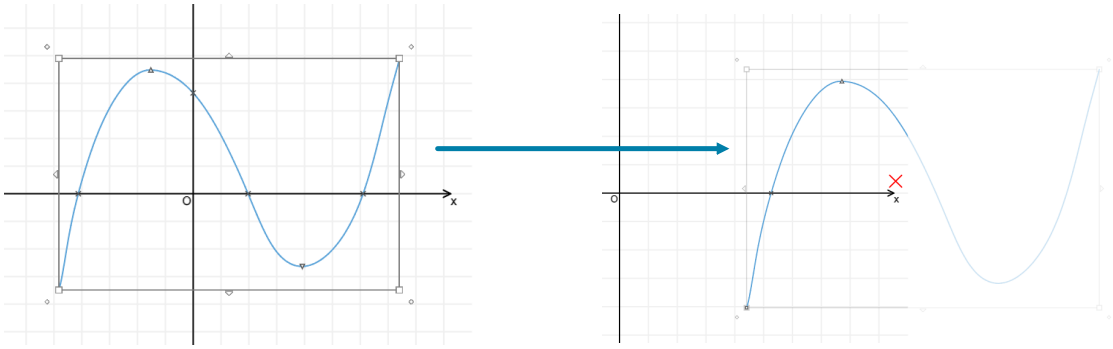
You can rotate it by dragging the outer handle near the corner.



You can move a turning point or end by dragging it.



You can delete a stroke by using the bin or dragging it off the grid.
Clear will delete everything.



How strict is it?

It uses rough positions:

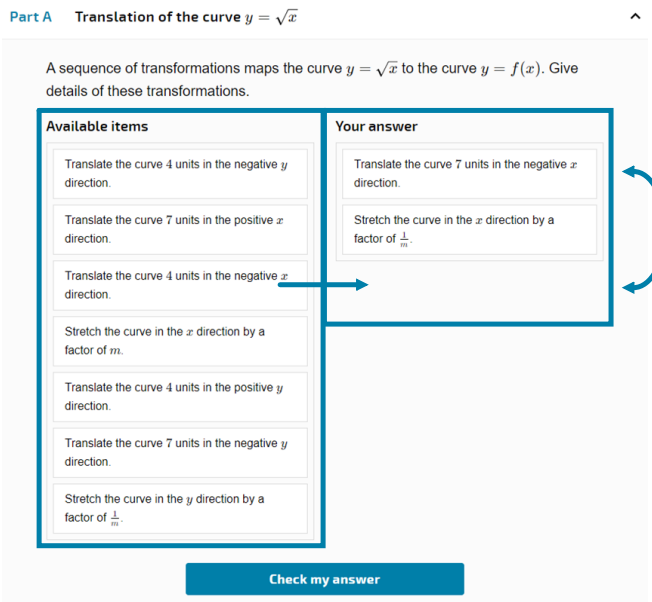
- Which quadrants?
- Where does it cross the axes? (+/- or origin)
- Where are the turning points?
- What are the start and end gradients?

Reorder Questions

Choose from available items

Drag items into the answer

Put items in the correct order

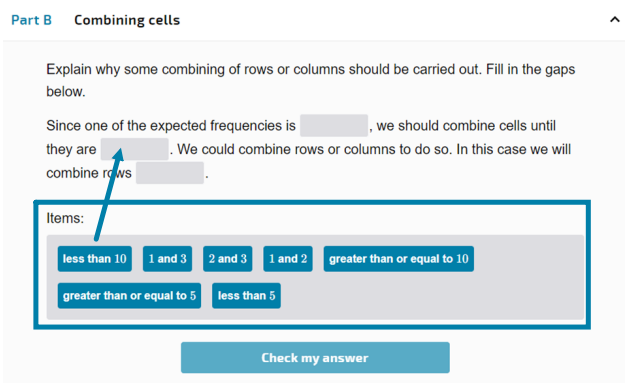


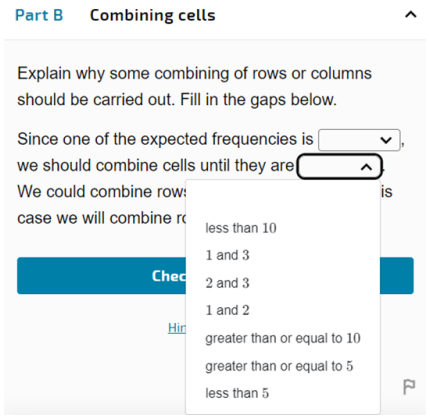
Cloze Text Questions

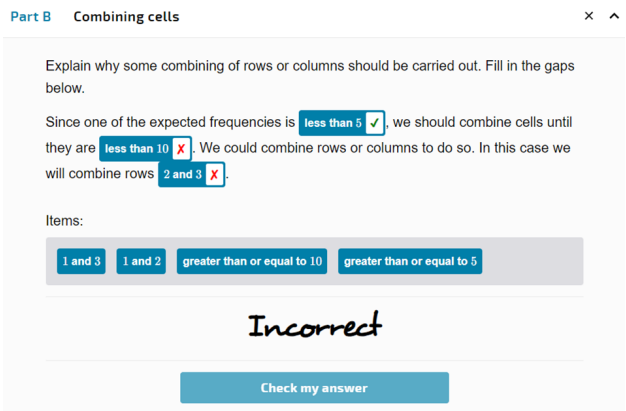
Drag items to fill in the boxes

Receive individual feedback on each item

Small screens use a dropdown menu





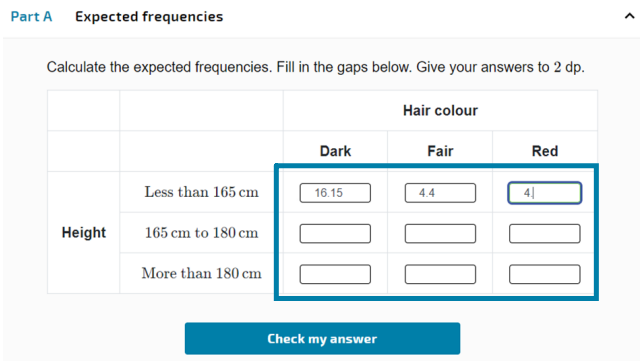


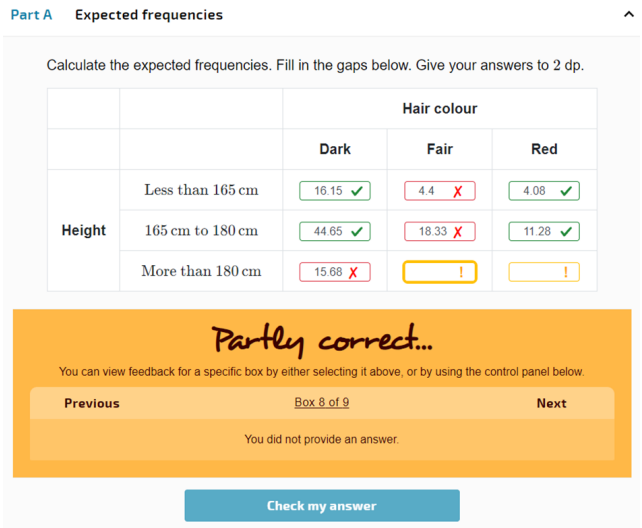
Inline Questions

Type numbers or text in the boxes

Receive individual feedback on each box

Some boxes may require units



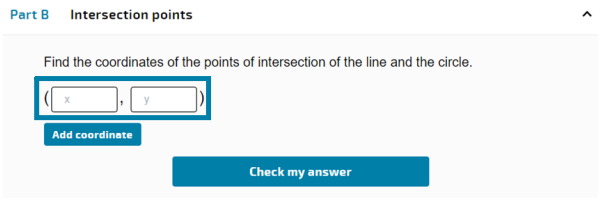


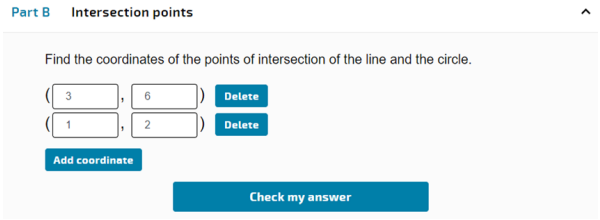
Coordinate Questions

Type numbers in the boxes

You can add/delete coordinates

Coordinate points can be submitted in any order (but not the abscissa and ordinate)





Have a go!

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Revision Boards	https://isaacphysics.org/pages/maths_practice#master_maths
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Questions to try	https://isaacphysics.org/gameboards#tcpd_newtoisaac_maths4