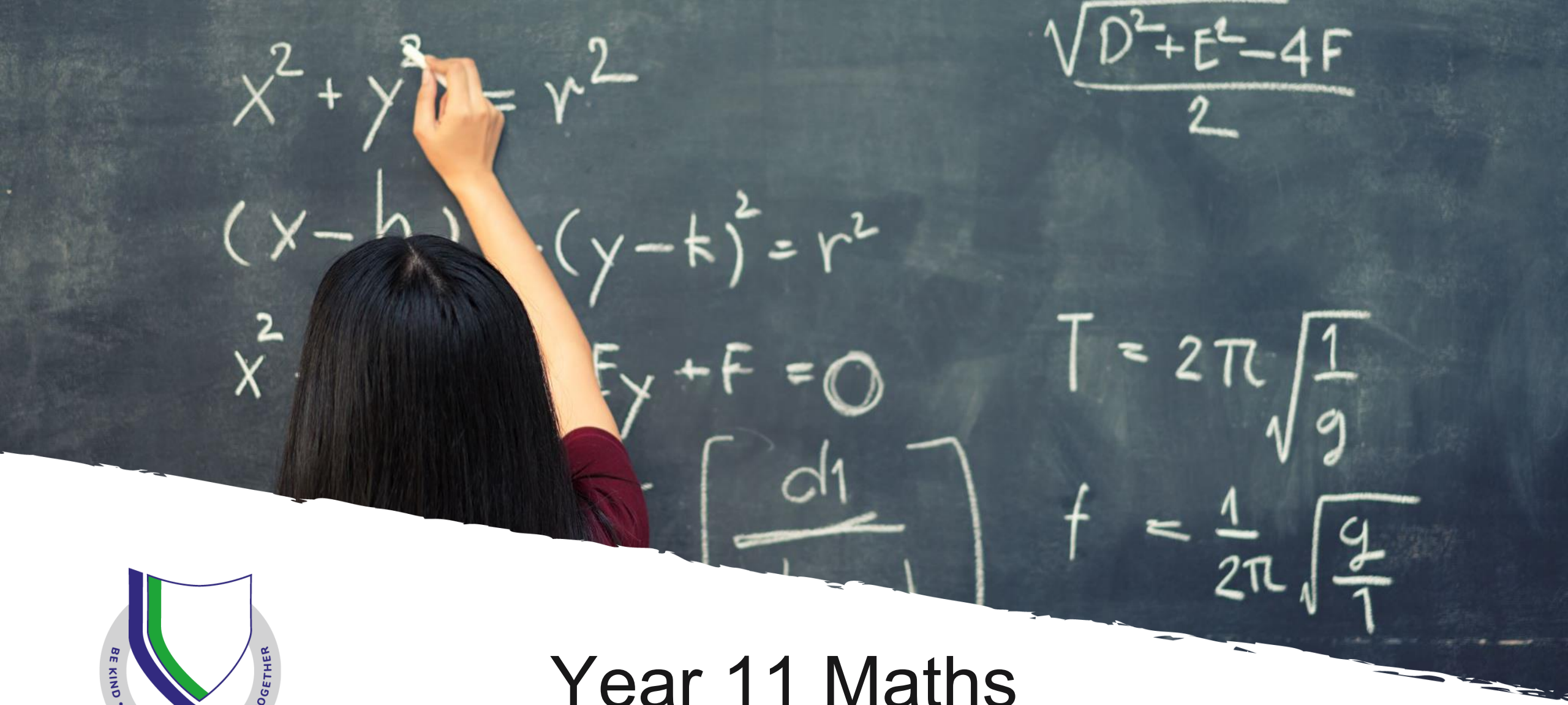


E-ACT Ousedale School

BE KIND • WORK HARD • SUCCEED TOGETHER

Year 11 Maths
GCSE Preparation

E-ACT

Maths Exams

Three Papers

All three:

- are 1 hour and 30 minutes long.
- are worth 80 marks.
- need mathematical equipment.

Paper one is the only paper you cannot use a calculator for

Maths Exams

Equipment Needed

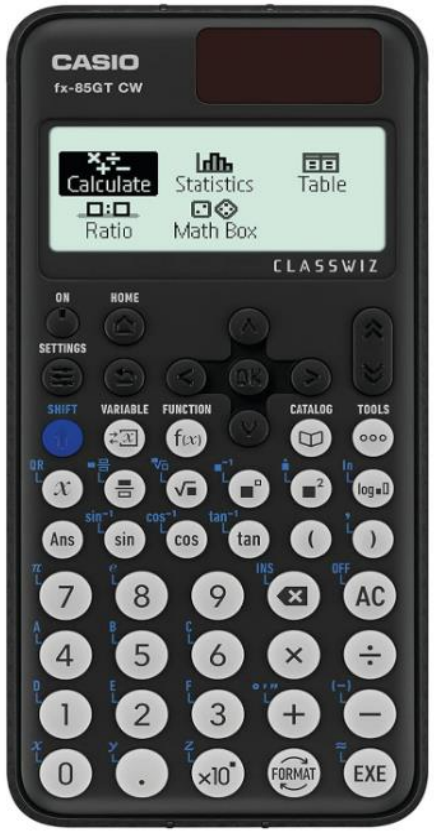
- Black Pens
- Pencils
- Rubber
- Ruler
- Protractor
- Compass
- Scientific Calculator

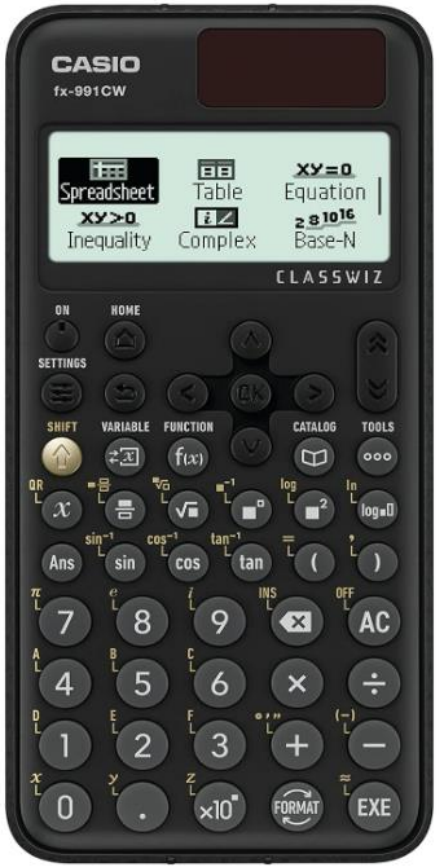
We recommend the Casio Classwiz Calculator FX 85 or FX 991 CW (if considering A-level)

Calculators

- New calculators have different functions and keys
- Check that students can put fractions and standard form into the calculator
- Make sure that they can reset and put into calculation mode
- Practise papers with the calculator that they will use in the exam

Casio FX-83GT CW FX-83GTCW and Casio FX-85GT CW FX-85GTCW Calculators full video manul has some videos explaining the functions and how to change formats





Maths Exams

How to Revise

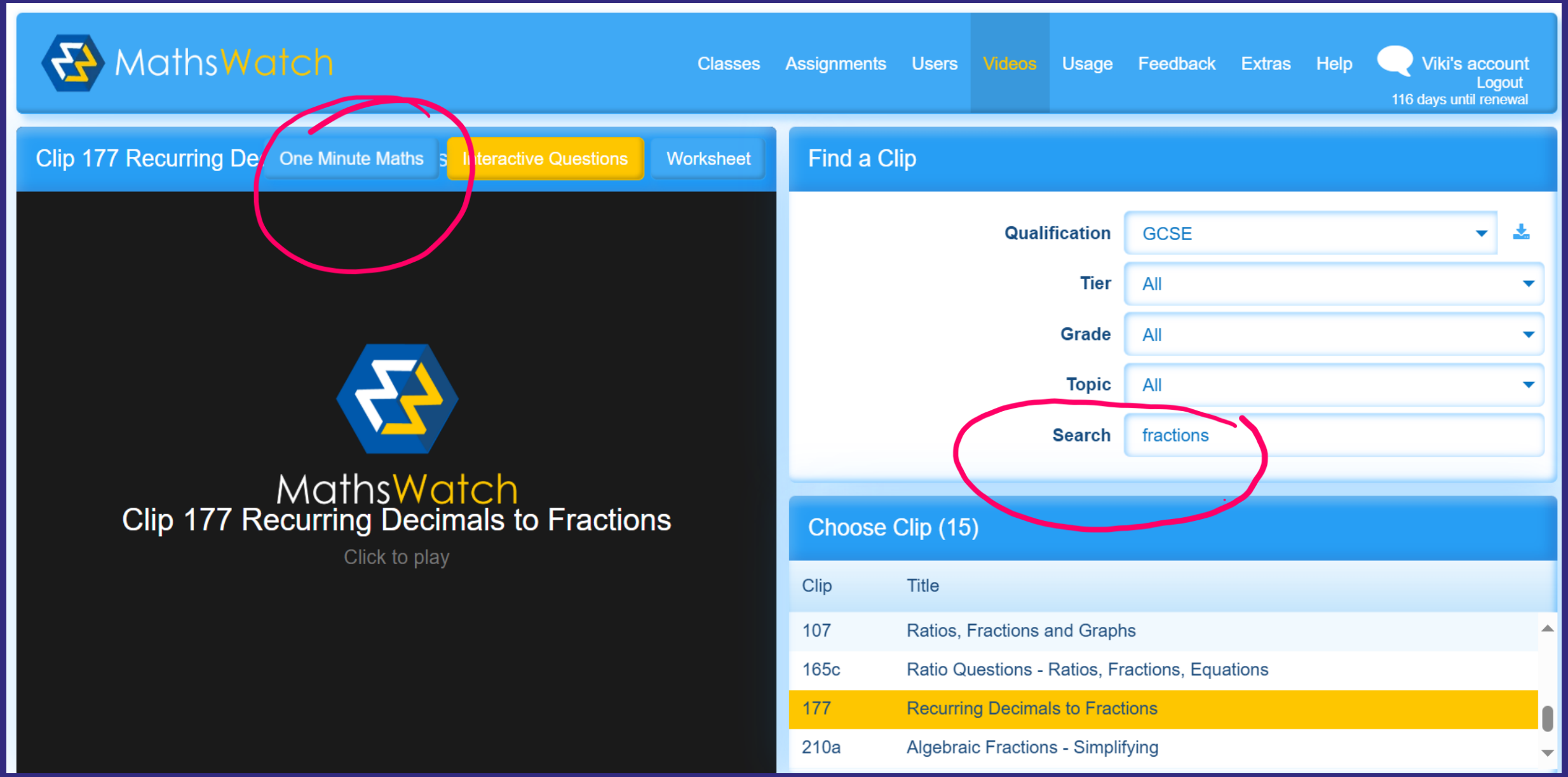
Before your first PPE:

- Use the revision list provided by your teacher
- Complete past papers as far as you possibly can

After your PPE1:

- Use the QLA sheets to help you identify areas that need more focus
- You may be invited to attend grade focused sessions

Use websites such as ww.mathsgenie.co.uk, www.mymaths.co.uk, www.gcsepod.co.uk , vle.mathswatch.co.uk, onmaths.com and 1stclassmaths.com or revision guides to relearn these topics


MathsWatch
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Interactive Questions
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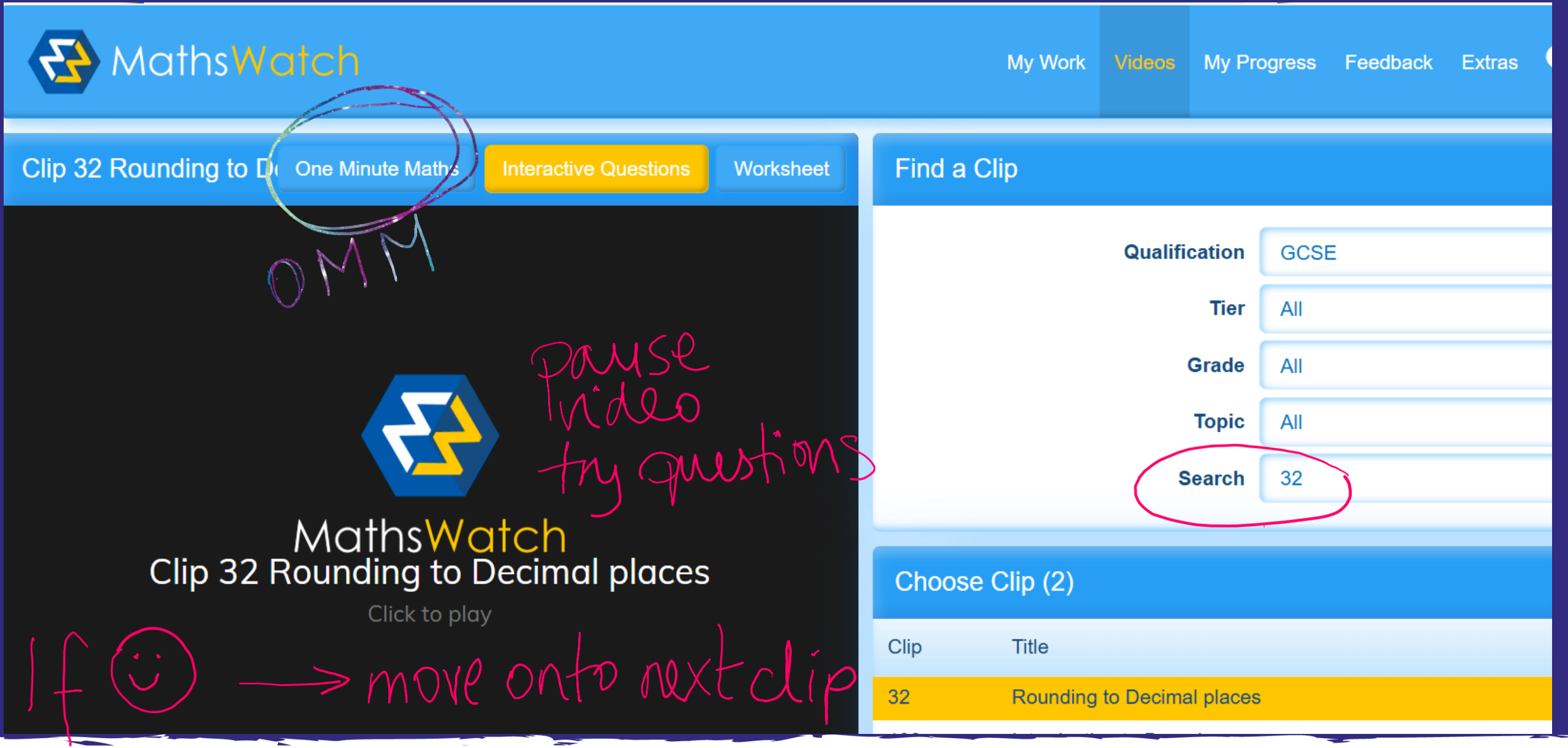
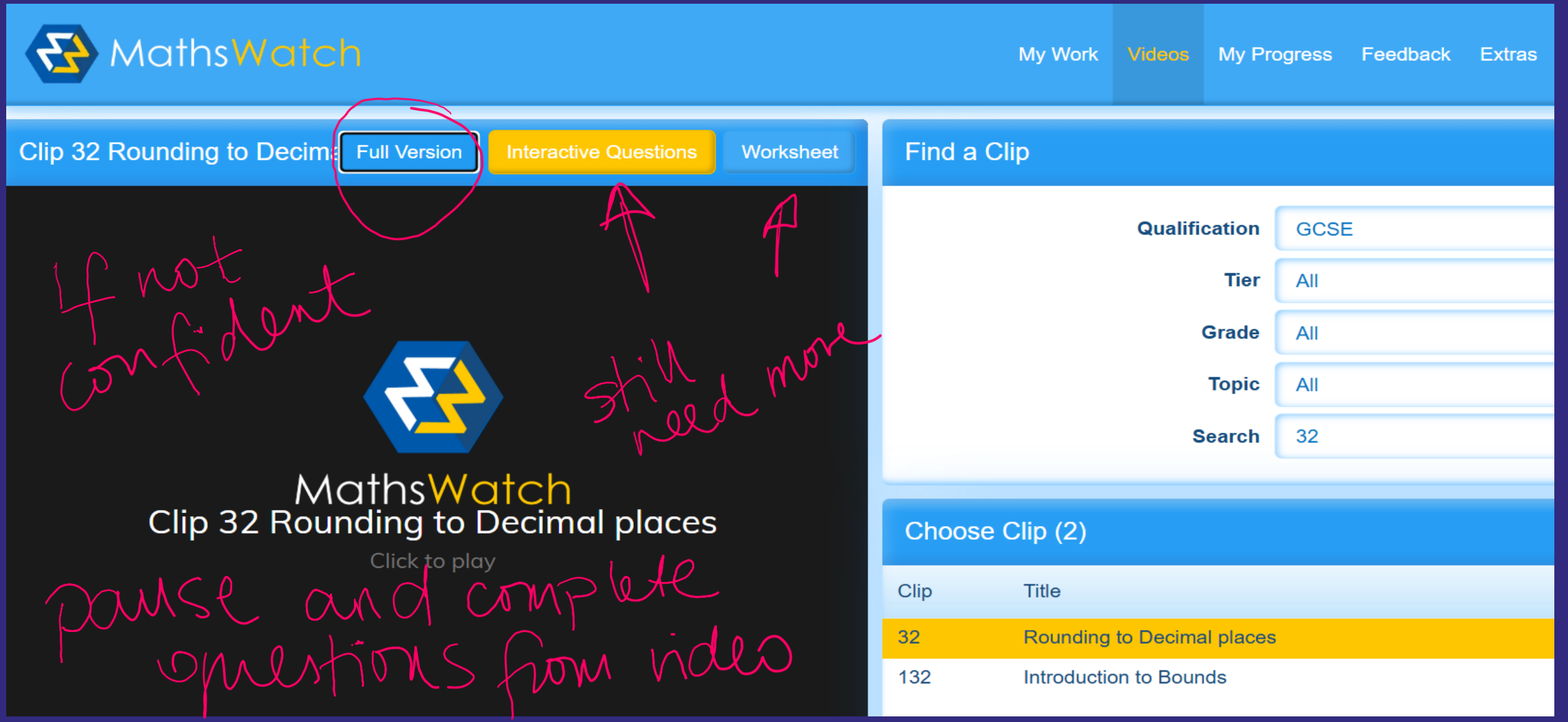
Choose Clip (15)
Clip
Title
107
Ratios, Fractions and Graphs
165c
Ratio Questions - Ratios, Fractions, Equations
177
Recurring Decimals to Fractions
210a
Algebraic Fractions - Simplifying

How to Revise



How to Revise



How to Revise

MathsWatch OR . . .

My Work | Videos | My Progress | Feedback | Extras

Clip 132 Introduction to Bou | Full Version | Interactive Questions | Worksheet

You can just go grade specific

MathsWatch
Clip 132 Introduction to Bounds
Click to play

Find a Clip

Qualification	GCSE
Tier	All
Grade	4
Topic	All
Search	

Choose Clip (31)

Clip	Title
131	Index Notation
132	Introduction to Bounds
133	Midpoint of a Line on a Graph

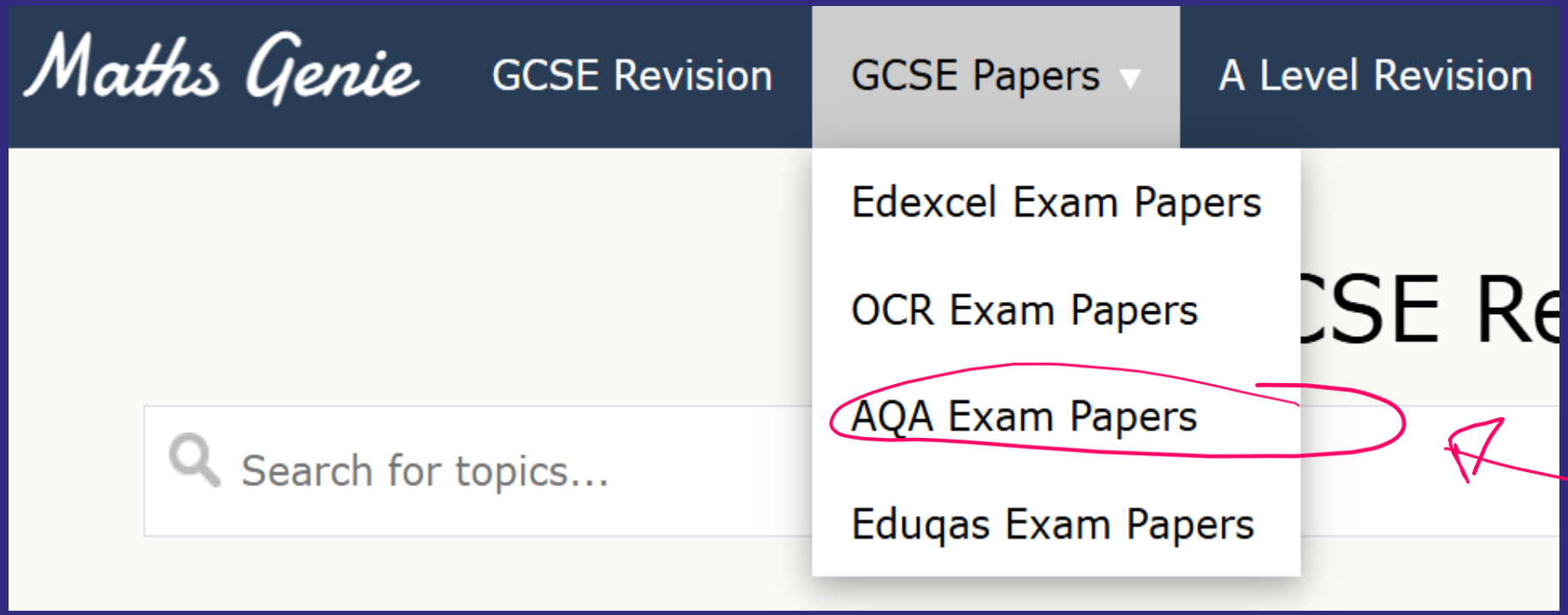
How to Revise

Maths Genie | GCSE Revision | GCSE Papers ▾ | A Level Revision | A Level Papers ▾ | KS2 Revision | Resources

Grade 4

#	Videos	Exam Questions	Exam Questions Booklet	Solutions
4.1	Compound Interest and Depreciation	Exam Questions	Compound Interest and Depreciation	Solutions
4.2	Indices	Exam Questions	Indices	Solutions
4.3	Prime Factors, HCF and LCM	Exam Questions	HCF, LCM	Solutions
4.4	Real Life and Distance Time Graphs		Real Life Graphs	Solutions
4.5	Inequalities	Exam Questions	Inequalities	Solutions
4.6	Forming and Solving Equations	Exam Questions	Forming and Solving Equations	Solutions
4.7	Sequences (Nth Term)	Exam Questions	Sequences (nth term)	Solutions
4.8	Expanding and Factorising	Exam Questions	Expand and Factorise	Solutions
4.9	Pythagoras	Exam Questions	Pythagoras	Solutions

How to Revise



Maths Exams

Things to Know

A formula sheet will be provided with formulae for:

Perimeter, area and volume

Pythagoras' theorem and trigonometry

Quadratic formula

But learn:

- ✓ Angle rules in words
- ✓ Exact values for sin, cos and tan of special angles
- ✓ Circle theorems (higher only)

Formula Sheet

Perimeter, area and volume

Where a and b are the lengths of the parallel sides and h is their perpendicular separation:

Area of a trapezium $= \frac{1}{2}(a+b)h$

Volume of a prism = area of cross section × length

Where r is the radius and d is the diameter:

Circumference of a circle $= 2\pi r = \pi d$

Area of a circle $= \pi r^2$

Quadratic formula

The solution of $ax^2 + bx + c = 0$ where $a \neq 0$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Higher only

Compound Interest

Where P is the principal amount, r is the interest rate over a given period and n is number of times that the interest is compounded:

$$\text{Total accrued} = P\left(1 + \frac{r}{100}\right)^n$$

Probability

Where $\mathrm{P}(A)$ is the probability of outcome A and $\mathrm{P}(B)$ is the probability of outcome B:

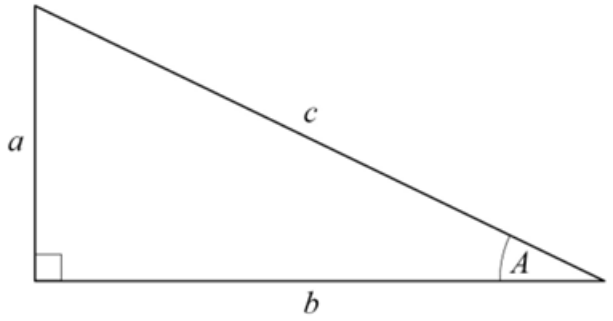
$$\mathrm{P}(A \text{ or } B) = \mathrm{P}(A) + \mathrm{P}(B) - \mathrm{P}(A \text{ and } B)$$

$$\mathrm{P}(A \text{ and } B) = \mathrm{P}(A \text{ given } B)\,\mathrm{P}(B)$$

Higher only

Formula Sheet

Pythagoras' Theorem and Trigonometry



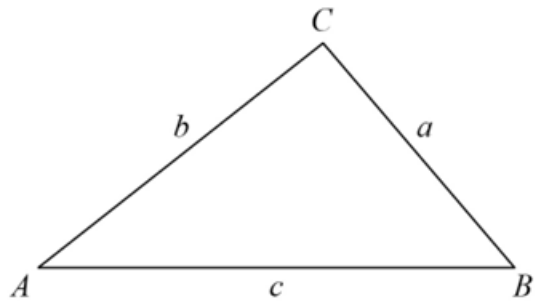
In any right-angled triangle where a, b and c are the length of the sides and c is the hypotenuse:

$$a^2 + b^2 = c^2$$

In any right-angled triangle ABC where a, b and c are the length of the sides and c is the hypotenuse:

$$\sin A = \frac{a}{c} \qquad \cos A = \frac{b}{c} \qquad \tan A = \frac{a}{b}$$

Higher only



In any triangle ABC where a, b and c are the length of the sides:

sine rule: $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$

cosine rule: $a^2 = b^2 + c^2 - 2bc\cos A$

Area of triangle $= \frac{1}{2}ab\sin C$

Maths Exams

Presentation

- Dark black pen as papers are scanned in
- Show solutions and stages of working carefully
- Practise checking answers
  (substitute solutions back into equations to check for errors)
- Cover up a line at a time and work through again

7. 10 girls and 15 boys sit a test.

The mean mark for the boys is 70.
The mean mark for the girls is 82.

Work out the mean mark for the whole class.

boys' total = 70 × 15 = 1050
girls' total = 82 × 10 = 820
total = 1870

mean = $\frac{1870}{25}$ =

74.8

(3)

Maths Exams

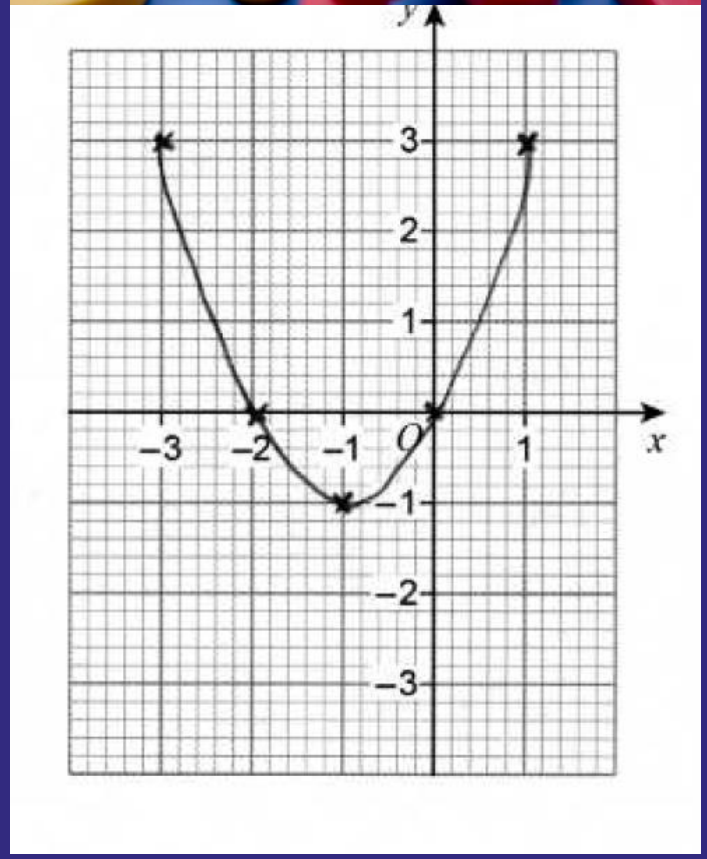
Presentation

- Lay out work logically and clearly.
- Don’t cross out attempts until you have a better attempt.
- Cross out with a single line
- Give answers in the form asked for
  (exact means as fractions, with π, or square roots NOT every digit from a calculator display)
- Always use decimals or fractions for probability

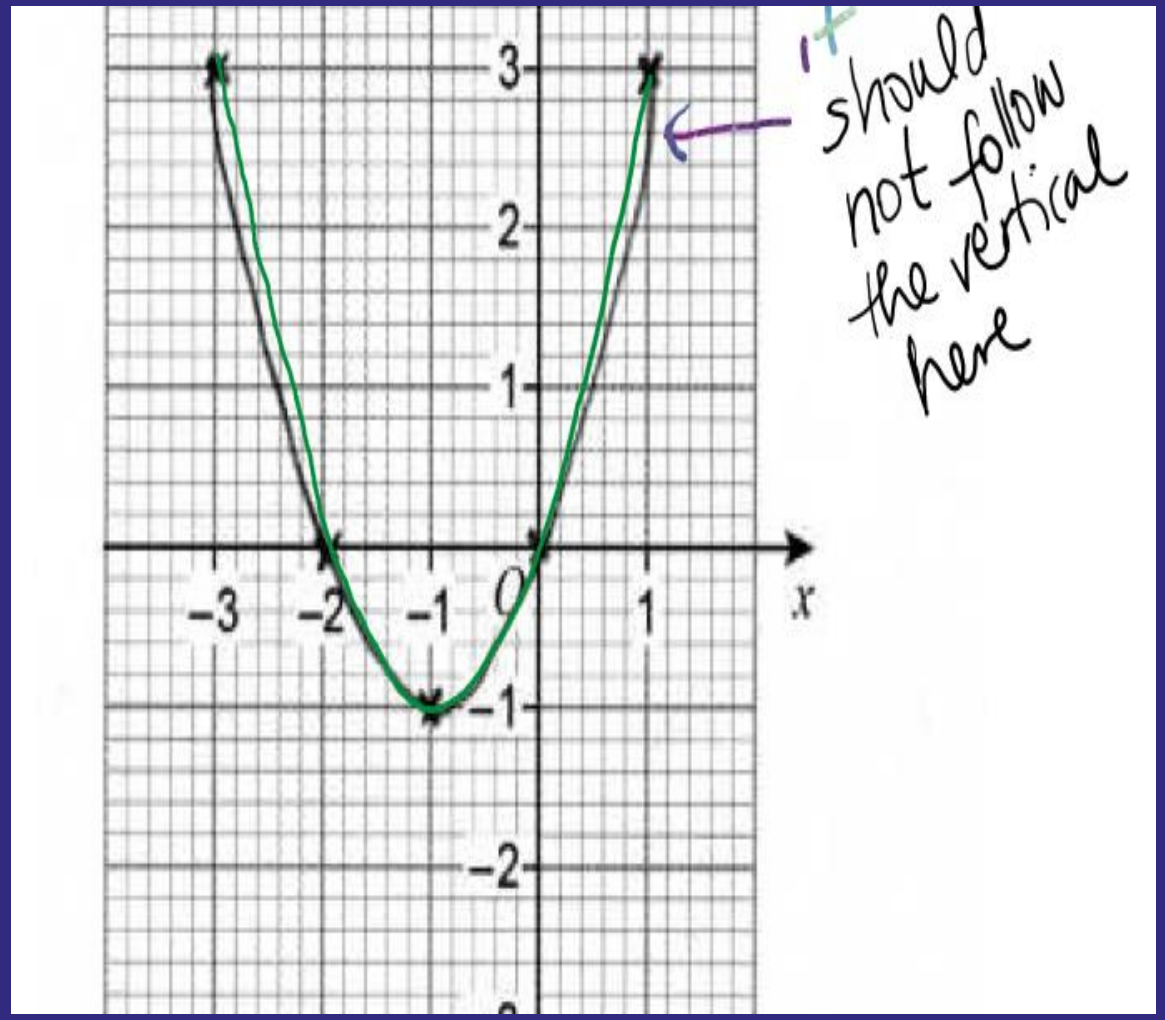
Maths Exams

Presentation

- Accuracy is important ($^1/_2$ a square on graphs)
- There will only be one space to use for diagrams
- Draw diagrams in pencil first and then rub out if necessary.
- Straight lines for linear graphs and lines of best fit
- Smooth curves for other graphs and cumulative frequency



This is what the graph should look like



Maths Exam Papers

Working Out

- Any question worth more than one mark will most likely have marks for your method
- Write down the calculations you are doing
- Even on a calculator paper write down what you've typed into the calculator
- Keep it neat and logical, don't jump all over the page
- Your examiner doesn't know you so doesn't know what you're thinking!

Maths Exam Papers

Supporting Preparations

- Encourage the use of post its, flashcards or posters to help them remember key facts
- Ask students to explain how they answered a question
- Encourage use of recommended websites and revision guides
  (a list of links can be found on sharepoint)
- Check that they have all necessary equipment especially a working calculator and practise using it