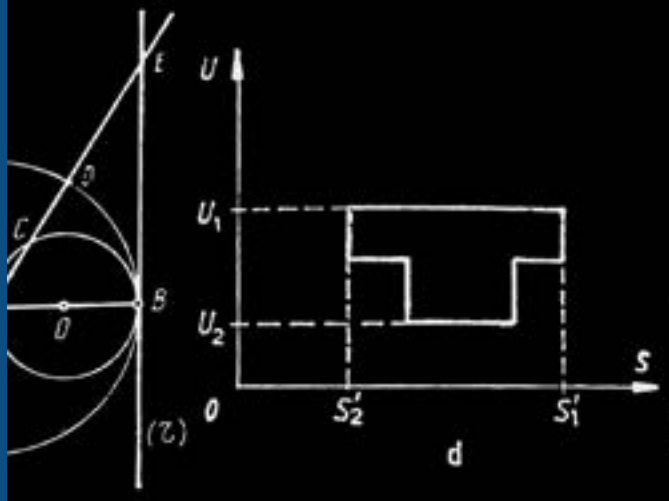
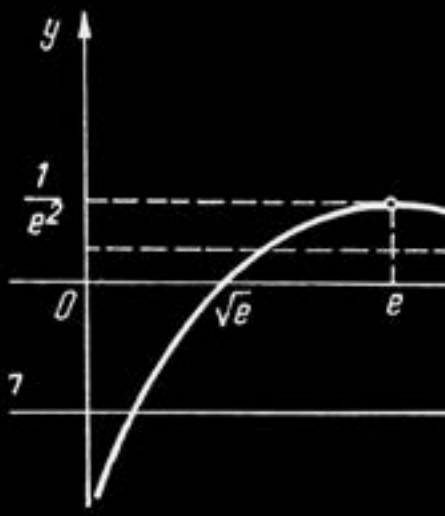
Edition 9
April
2025

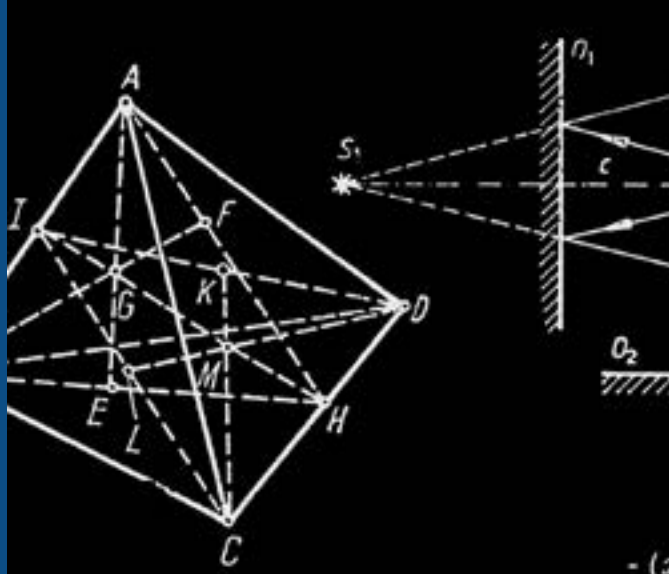
MATHEMATICS
YEAR 11
Curriculum Newsletter





$$\int_{-a}^{0} x^2 e^{ax}\,dx = \frac{1}{a}\left(x^2 e^{ax}\right)\Big|_{-a}^{0} - \frac{2}{a}\left[\frac{1}{a}\left(xe^{ax}\right)\Big|_{-a}^{0} - \frac{1}{a}\int_{-a}^{0} e^{ax}\,dx\right] = -a^2 e^{-a^2} - \frac{2}{a}\left[\frac{1}{a}e^{-a^2} + \frac{2}{a^2}\left[\frac{1}{a}\left(e^{ax}\right)\Big|_{-a}^{0}\right]\right] = -ae^{-a^2} - \frac{2}{a^2}e^{-a^2} + \frac{2}{a^3}\left(1 - e^{-a^2}\right) = \frac{1}{a^3 e^{a^2}}\left[2e^{a^2} - 2 - 2a^2 - a^4\right].$$

$$\frac{1}{n+1} + \frac{1}{n+1}\cdot\frac{1-\left(-\frac{1}{n+1}\right)^{n+1}}{1+\frac{1}{n+1}} = \frac{1}{n+1} + \frac{1}{n+2}\left[1-\left(-\frac{1}{n+2}\right)^{n+1}\right] = \frac{1}{n+2} + (-1)^n \cdot \frac{n+3}{n+1}\cdot\frac{1}{(n+2)^n}$$



0	0	4	50	104	170
0	0,5	0,6	0,8	0,9	1,0
0	−1,05	−2,1	−3,2	−4,2	−5,3
0	−1	−2	−3	−4	−5
0	0	4	44	115	175
0	0,4	0,6	0,8	0,9	1,0
0	−0,4	−0,76	−1,12	−1,5	−1,9
0	−1	−2	−3	−4	−5
0	1,4	2,8	4,2	5,6	7,1
0	1	2	3	4	5
0	−1,4	−2,8	−4,2	−5,6	−7,1
0	−1	−2	−3	−4	−5

$$\cdot (x+t)I_2) + (xt - yz)I_2 = 0.$$

$$\begin{pmatrix} x & y \\ z & t \end{pmatrix} - \begin{pmatrix} x+t & 0 \\ 0 & x+t \end{pmatrix} = \left($$

$$\begin{pmatrix} y \\ t \end{pmatrix}\begin{pmatrix} -t & y \\ z & -x \end{pmatrix} = \begin{pmatrix} yz - xt \\ 0 \end{pmatrix}$$

$$yz - xt)I_2 = -(xt - yz)I_2,$$

Contact

David Kennedy
Subject Director
dkennedy@wickersley.net

Curriculum Intent

It is our intention that every student leaves school confident and competent to deal with any mathematical problem they may face in their lives and future careers.

This is achieved through promoting students to; be resilient in their approach, take risks to deepen their knowledge, forge valuable working relationships and take responsibility for and enjoy their learning. We aim to push students to be the best mathematicians by building up their skills base and maximising their attainment and understanding in mathematics at whichever stage that may be.

We ensure a coherent mathematics scheme of work that challenges all students and promotes teaching and learning; this provides students with the knowledge and skills to achieve well academically, and be successful once their education with us ends.

Year 11 Curriculum

In Year 11, learning is focussed on units that will help the students complete this GCSE examinations. Click on the text below for more GCSE information.

Students will be either working towards their foundation or higher examination this Summer.

Students are being entered for the OCR specification and have been working on this throughout the year.

They will also be studying bespoke schemes of work depending on their class to ensure that they have covered all of the content within the course and are covering any gaps in learning from previous years.

Exam technique and revision will be a priority moving forward and students will be exposed to a number of exam style questions to ensure they are confident in accessing these and understand how to achieve maximum marks on these questions.

Assessment Points

Students are assessed at the end of each theme, roughly once per half term. Assessments are written and include fluency, reasoning and problem-solving questions.

Immerse Yourself

Maths Watch

- Develop Skills
- Tests and Topics
- Maths Revision at home

BBC Bitesize GCSE Maths

- Get Revising Quicker!
- Videos and Links
- Study Support and Revision

Students have access to MathsWatch to support their revision which links to the tracker sheets filled in during lessons.

If they are struggling with topics in lessons or want to enhance their learning in the classroom then these clip numbers are an ideal place to cover content at home.

The MathsWatch website has short video clips as well as having links to interactive questions and further worksheets.

Test Your Knowledge with Quizlet...

Quizlet's Y11 Maths flashcards are a fantastic way to memorise relevant Maths terms to help you with your studies. Click on the icon below to start!

Praise and Reward

Our rewards system can be broadly split into four categories: classroom level, subject level, school level and privilege rewards. We'll focus on classroom and subject rewards here - for more information about our rewards schemes, please see our website.

CLASSROOM LEVEL REWARDS

Awarded for: working hard, taking risks and rising to a challenge, making mistakes and learning from them, helping others, and taking pride in the school community.

Rewarded by: praise postcards, positive phone calls to parents/carers, positive text messages home, and lesson based prizes.

SUBJECT LEVEL REWARDS

Reward scheme: Star of the Week, Curriculum Awards (Subject/School Way, Participation, Working with Pride, Embracing the Whole Curriculum), High Flyer, Extra Mile, Most Improved.

Rewarded by: names displayed on reward boards, certificates, social media posts.

Broadening Horizons

Our intent is that all students have a full understanding of how to develop themselves as well rounded citizens, maintain healthy relationships and understand how to keep themselves safe both online and in their day-to-day life.

We want all students to know what options are open to them in the future and understand the routes they have in order to progress on their life journey.

Our curriculum will include:

- Exposing learners to worded problem-solving questions based on real life situations
- Using Maths across the curriculum, such as calculating in standard form in Science and working out percentage change in Geography
- Opportunities throughout the curriculum that expose learners to careers involving mathematical knowledge and skills

AMSP - Support Beyond GCSE Maths

Advanced maths qualifications are highly regarded by employers and universities. They are often required or recommended, and may lead to reduced offers for entry to university and degree apprenticeship programmes, even for subjects that don't have a large amount of mathematical content. Examples of universities that provide reduced offers for these qualifications include Bath, Sheffield and York. What's more, if you're well-qualified in maths you tend to earn more. Click the logo for more information.

BBC Bitesize - Jobs that use Maths

Where could your favourite subject take you? Get inspired by people using Maths in real-life jobs. Find out how much you could get paid for different roles and what qualifications you might need. Click the icon for more information.

Careers

As your children prepare to sit their GCSE Maths exams, it's important to remember that Mathematics is a subject with vast career opportunities. Careers that require strong mathematical skills include those in Science, Engineering, Finance, and Technology.

Maths plays a critical role in a variety of career fields, and by developing a strong foundation in Maths, your children can open up a range of exciting career opportunities and pave the way for a successful future. Click on the image below to see further opportunities in The School of Maths and Statistics in the University of Sheffield.

University of Sheffield

The Maths Way

The Maths way is followed and referred to in all lessons. It supports students to become young mathematicians and develop them into thinking and working like mini-mathematicians.

Firstly, to teach students the vital skills they need to achieve their full potential and gain the very best grades they can. Secondly, to teach students how each subject relates to the wider world, incorporating the life skills they will learn.

Have your say!

At WPT we're always looking for feedback. If you have any thoughts/opinions on this Curriculum Newsletter, its content or the curriculum in general, please click on the title to fill out a short feedback form.