

$$\begin{aligned} \therefore I &= \int \frac{1}{u^3 - u} \\ &= 2 \cdot \frac{1}{2} \log \left(\frac{u-1}{u+1} \right) + C = \log \left(\frac{u-1}{u+1} \right) + C \\ &= \log \left(\frac{\sqrt{x}-1}{\sqrt{x}+1} \right) + C \end{aligned}$$

(2) Let $I = \int \frac{\sqrt{x+1}}{x} dx$
 Let $u^2 = x+1$
 $2u du = dx$

$$\begin{aligned} \therefore I &= \int \frac{u}{u^2-1} \cdot 2u du = \int \frac{2u^2}{u^2-1} du \\ &= 2 \int \left[\frac{u^2-1}{u^2-1} + \frac{1}{u^2-1} \right] du = 2 \int \left[1 + \frac{1}{u^2-1} \right] du \\ &= 2 \left[\int du + \int \frac{1}{u^2-1} du \right] = 2 \left[u + \frac{1}{2} \log \left(\frac{u-1}{u+1} \right) \right] + C \\ &= 2\sqrt{x+1} + \log \left(\frac{\sqrt{x+1}-1}{\sqrt{x+1}+1} \right) + C \end{aligned}$$

Formula : $\int \frac{1}{x^2 - a^2} dx = \frac{1}{2a} \log \left(\frac{x-a}{x+a} \right), (x > a)$

(3) Let $I = \int \frac{1}{(1+x)^{1/2} - (1+x)^{1/3}}$

St. Julie's Catholic High School

Teacher of Mathematics (Mat Cover Only)

Application Pack

REQUIRED FOR SEPTEMBER 2026

Contract: Full time/Fixed Term (Minimum of Two Terms)

Salary: MPR1 to UPR3



Welcome to St Julie's Catholic High School

"Serve the Good God Well with Much Liberty of Spirit"

Dear Applicant

Thank you for your interest in the post of Teacher of Mathematics at St Julie's Catholic High School. I would like to highlight what makes our community special and how proud we are of our unique school.

St Julie's is a popular oversubscribed 11-18 girls' school in Woolton, South Liverpool. We are an inclusive school welcoming students of all faiths or none and celebrate diversity as central to our core purpose.

GCSE and Sixth Form results demonstrate good progress in line with national. We benefit from state-of-the-art buildings and an inspiring learning environment which we moved to in 2017.

Our Trustees are the Sisters of Notre Dame and we are part of the Archdiocese of Liverpool family of schools as well as the wider family of Liverpool schools. The Archdiocesan strategy to develop Catholic Multi Academy Trusts, so that every school has a named CMAT to join at the appropriate time, is an ongoing development as part of the changing educational landscape in Liverpool and throughout the Archdiocese.

We aim to be a Catholic learning community through our mission statement:

- which respects and embraces the diversity of all God's people
- where opportunities allow for all individuals to discover their

potential and to develop and share their unique talents

- where friendship and enjoyment are experienced by all and a welcome is offered to those who visit
- which provides all with a safe and secure environment
- where faith, prayer and reflection are visible in word and in action
- which takes good care of God's world and all who inhabit it, especially the poor and disadvantaged
- where fairness, care and compassion are central to life

The Sisters of Notre Dame de Namur were founded in 1809 by St Julie Billiard. St. Julie's predominating trait in the spiritual order was her ardent charity, springing from a lively, devout faith. Her whole soul was echoed in the simple formula which was continually on her lips and pen: "Qu'il est bon, le bon Dieu" (How good God is). She possessed all the qualities of a perfect superior, and inspired her subjects with filial confidence and tender affection. Julie is known as the smiling saint.

At St Julie's following in the footsteps of our founder Julie Billiard our community is one of fairness, care and compassion and everything we do reflects these values. Her teachings are at the core of our catholic school and focus our moral purpose.

St Julie lived in very challenging times- through wars, revolution and poor

health as well as a constant battle with the authorities to establish the Sisters of Notre Dame de Namur. She said *“Never let the peace of your heart be disturbed by anything in the world.”* She also said that *“we must have hearts as wide as the world.”*

Our values of faith, truth, joy, love, justice and hope mean we seek to encourage all members of our community to serve with much liberty of spirit. Our young people prove their commitment to these values in their school and daily life. We pride ourselves on the support we provide for some of our more vulnerable pupils who live their lives in challenging circumstances.

We encourage our students to aspire to be successful in whichever field or interest they choose, whether that be in sport, academic and creative achievements, or selflessly helping others. We try to create the opportunities and nurturing environment for their success.

In May 2023 OFSTED stated that

“Students including Sixth Form are proud to be part of this caring and close-knit school community”

“A typical view that students shared with inspectors was that – everyone is welcome here, you can be yourself”

We are seeking to appoint a dynamic and enthusiastic teacher of

Mathematics to join our popular Mathematics department. You will be passionate about your subject, whilst transferring your knowledge in a creative and contextualised way in the classroom and successfully plan and deliver consistently good lessons on a daily basis that both challenge our students and significantly advance their learning. You will be relentless in your pursuit of progress for each and every one of your students so they can achieve the outcomes they deserve and grow into young adults that positively contribute to their community. You will instil pride in the work they do and encourage their individuality and personal qualities.

We look forward to receiving your application and hopefully meeting you soon.

Yours sincerely

Mrs Kate McCourt
Headteacher

“Let us help each other with all our hearts and with all prayers”

St Julie Billiard

Job Description

Teacher of Mathematics (Maternity Cover)

Salary: MPR to UPR3

Contract type: Full Time/Fixed Term

Reporting to: Curriculum Leader

Post Title:	Teacher of Mathematics (Fixed Term)
Purpose:	<ul style="list-style-type: none"> To implement and deliver an appropriately broad, balanced, relevant and differentiated curriculum for students and to support a designated subject area as appropriate. To monitor and support the overall progress and development of students as a teacher/Form Tutor. To facilitate and encourage a learning experience which provides students with the opportunity to achieve their individual potential. To contribute to raising standards of student attainment. To share and support the school responsibility to provide and monitor opportunities for personal and academic growth.
Reporting to:	Curriculum Leader
Responsible for:	The provision of a full learning experience and support for students.
Liaising with:	Headteacher, Deputy Headteacher, Assistant Headteacher, teaching/support staff, Children’s Services, external agencies and parents.
Working Time:	195 days per year. Full time.
Salary/Grade:	MPR1 to UPR3
Disclosure level:	Enhanced
MAIN (CORE) DUTIES	
Operational/ Strategic Planning:	<ul style="list-style-type: none"> To assist in the development of appropriate syllabuses, resources, schemes of work, marking policies and teaching strategies in the Subject Area and Department. To contribute to the Subject Area and department’s development plan and its implementation. To plan and prepare courses and lessons. To contribute to the whole school’s planning activities.

Curriculum Provision:	<ul style="list-style-type: none"> • To assist the Curriculum Leader and Deputy Headteacher to ensure that the curriculum area provides a range of teaching which complements the school's Strategic Objectives.
Curriculum Development:	<ul style="list-style-type: none"> • To assist in the process of curriculum development and change so as to ensure the continued relevance to the needs of students, examining and awarding bodies and the school's Mission and Strategic Objectives.
Staffing Staff Development Recruitment/ Deployment of Staff	<ul style="list-style-type: none"> • To take part in the school's staff development programme by participating in arrangements for further training and professional development. • To continue professional development in the relevant areas including subject knowledge and teaching methods. • To engage actively in the Performance Management Review process. • To ensure the effective/efficient deployment of classroom support. • To work as a member of a designated team and to contribute positively to effective working relations within the school.
Quality Assurance:	<ul style="list-style-type: none"> • To help to implement school quality procedures and to adhere to those. • To contribute to the process of monitoring and evaluation of the subject area/department in line with agreed school procedures, including evaluation against quality standards and performance criteria. • To seek/implement modification and improvement where required. • To review from time to time methods of teaching and programmes of work. • To take part, as may be required, in the review, development and management of activities relating to the curriculum, organisation and pastoral functions of the school.
Management Information:	<ul style="list-style-type: none"> • To maintain appropriate records and to provide relevant accurate and up-to-date information for MIS, registers, etc. • To complete the relevant documentation to assist in the tracking of students. • To track student progress and use information to inform teaching and learning.

Communications	<ul style="list-style-type: none"> • To communicate effectively with the parents of students as appropriate. • Where appropriate, to communicate and co-operate with persons or bodies outside the school • To follow agreed policies for communications in the school
Marketing and Liaison:	<ul style="list-style-type: none"> • To take part in marketing and liaison activities such as Open Evenings, Parents' Evenings, Review days and liaison events with partner schools.
Management of Resources:	<ul style="list-style-type: none"> • To contribute to the process of the ordering and allocation of equipment and materials • To assist the Curriculum Leader to identify resource needs and to contribute to the efficient/effective use of physical resources. • To co-operate with other staff to ensure a sharing and effective usage of resources to the benefit of the school, department and the students.
Pastoral System:	<ul style="list-style-type: none"> • To be a Form Tutor to an assigned group of students. • To promote the general progress and well-being of individual students and of the Form Tutor group as a whole. • To liaise with an Assistant Headteacher to ensure the implementation of the school's Pastoral System. • To register students, accompany them to assemblies, encourage their full attendance at all lessons and their participation in other aspects of school life. • To evaluate and monitor the progress of students and keep up-to-date student records as may be required. • To contribute to the preparation of action plans and progress files and other reports. • To alert the appropriate staff to problems experienced by students and to make recommendations as to how these may be resolved. • To communicate as appropriate, with the parents of students and with persons or bodies outside the school concerned with the welfare of individual students, after consultation with the appropriate staff. • To contribute to citizenship and enterprise according to school policies. • To apply the Behaviour Management systems so that effective learning can take place.
Teaching:	<ul style="list-style-type: none"> • To teach students according to their educational needs, including the setting and marking of work to be carried out by the students in school and elsewhere.

- To assess, record and report on the attendance, progress, development and attainment of students and to keep such records as are required.
- To provide or contribute to oral and written assessments, reports and references relating to individual students and groups of students.
- To ensure that ICT, Literacy, Numeracy and school subject specialism(s) are reflected in the teaching/learning experience of students.
- To undertake a designated programme of teaching.
- To ensure a high quality learning experience for students which meets internal quality standards.
- To prepare and update subject materials.
- To use a variety of delivery methods which will stimulate learning appropriate to student needs and demands of the syllabus.
- To maintain discipline in accordance with the school's procedures and to encourage good practice with regard to punctuality, behaviour, standards of work and homework.
- To undertake assessment of students as requested by external examination bodies, departmental and school procedures.
- To mark, grade and give written/verbal and diagnostic feedback as required.

Other Specific Duties:

- To play a full part in the life of the school community, to support its distinctive mission and ethos and to encourage staff and students to follow this example.
- To support the school in meeting its legal requirements for worship.
- To promote actively the school's corporate policies.
- To continue personal development as agreed.
- To comply with the school's Health and Safety policy and undertake risk assessments as appropriate.
- To undertake any other duty as specified by STPCD not mentioned in the above.
- To uphold Threshold standards at all times (UPS1 – UPS3 grades)

Whilst every effort has been made to explain the main duties and responsibilities of the post, each individual task undertaken may not be identified.

Employees will be expected to comply with any reasonable request from a manager to undertake work of a similar level that is not specified in this job description.

Employees are expected to be courteous to colleagues and to provide a welcoming environment to visitors, and when answering telephone calls.

The school will endeavour to make any necessary reasonable adjustments to the job and the working environment to enable access to employment opportunities for disabled job applicants or continued employment for any employee who develops a disabling condition.

The job description is current at the date shown but following consultation with you may be changed by the Headteacher to reflect or anticipate changes in the job which are commensurate with the salary and job title.

Person Specification

The Governors wish to appoint a candidate who has the qualifications, experience, knowledge and skills described in this specification. The successful candidate will be able to demonstrate that they meet all of the essential criteria listed below.

	ESSENTIAL
Qualifications	<ul style="list-style-type: none"> • Good Degree in Mathematics • Qualified Teacher Status • Meets the requirements for registration with the Teachers' Regulation Agency
Experience	<ul style="list-style-type: none"> • The ability to teach GCSE and A-level exam courses • The ability to provide stimulating, well-planned lessons across the age and ability range of 11-18
Skills, knowledge and qualities	<ul style="list-style-type: none"> • Excellent subject knowledge • High expectations for self and students • An interest in finding the best ways to maximise students' learning • Excellent teaching skills for pupils of all abilities and able to apply a range of teaching strategies to meeting well defined learning objectives • Good knowledge of practical strategies to differentiate learning • Good knowledge of different assessment techniques and ability to use assessment information constructively to help students learn. • Good behaviour management skills • Skilled in the use of Information Technology to enrich learning • A knowledge and interest in how children learn and the desire and ability to teach students how to learn explicitly through a learning to learn curriculum • Knowledge of the National Examination requirements for Mathematics • A readiness and ability to reflect regularly on own practice and develop professionally

	<ul style="list-style-type: none"> • Able to work positively and constructively with other staff and students.
Personal Qualities	<ul style="list-style-type: none"> • Positive, open minded, hardworking, enthusiastic, creative, a readiness to develop and learn professionally.
Pastoral Skills	<ul style="list-style-type: none"> • The ability to carry out the role of form tutor effectively • Willingness to be involved in the pastoral side of the school • Able to maintain a professional, yet caring and compassionate approach to dealing with students • Suitable to work with children. An Enhanced Disclosure check will be completed on the successful applicant
Extra-Curricular	<ul style="list-style-type: none"> • Willingness to be involved in extra-curricular activities
General	<ul style="list-style-type: none"> • Supports the ethos of the school • Flexible and adaptable • Sense of humour, positive attitude and resilience

Closing date for applications: Friday 3rd July 2026 at 9am

Shortlisting will take place: Monday 6th July 2026

Interviews will be held: Monday 13th July 2026

Key Information

Status	Voluntary Aided Trustees- Sisters of Notre Dame
OFSTED	St Julie's continues to be a good school May 2023 (Section 8)
Section 48	Good with outstanding for Catholic Life & Mission, Feb 2024
Forms of Entry	6
No of pupils on roll	1019

- [Safeguarding Policy](#)
- [Code of Staff Conduct](#)
- [Safer Recruitment Policy](#)

Visit our website for more information www.stjulies.org.uk