

**GRADE 11 MATHEMATICS
NOVEMBER EXAMINATION PAPER 2**

QUESTION 1

1.1 Calculate the following with the use of a calculator:

1.1.1 $\sin 43^\circ + \cos 47^\circ$ (1)

1.1.2 $\tan^2 50^\circ$ (1)

1.1.3 $\cot 33^\circ + \operatorname{cosec} 15^\circ$ (1)

1.2 If $A = 34,3^\circ$ and $B = 22,2^\circ$, calculate the following to two decimal places:

1.2.1 $\sin (A + B)$ (2)

1.2.2 $\sec \left(\frac{A}{2}\right)$ (2)

1.3 Calculate the following without the use of a calculator:

1.3.1 $\sin 30^\circ + \cos 60^\circ$ (1)

1.3.2 $\tan 45^\circ + \cos 45^\circ$ (1)

1.3.3 $\cos 90^\circ + \sin 90^\circ$ (1)

[12]

QUESTION 2

Without the use of a calculator, answer the following questions:

2.1 Given $\cos \theta = -\frac{1}{2}$ and $0^\circ \leq \theta \leq 180^\circ$
Use a diagram to determine the values of:

2.1.1 $\tan (180^\circ + \theta)$ (1)

2.1.2 $3\sin (\theta - 90^\circ)$ (2)

2.2 Simplify the following expression: $\frac{\sin (-230^\circ)}{\cos (260^\circ)} + \frac{\cos (90^\circ)}{\sin (260^\circ + 40^\circ)}$ (5)

2.3 Prove that: $\tan \theta \sqrt{\frac{1}{\sin^2 \theta} - 1} = 1$ (4)

2.4 Determine the general solution for: $3\sin^2 \theta = 1 + \sin \theta$ (6)

[28]

QUESTION 3

3.1 Sketch on the same set of axes the graphs for:

$f(x) = -2\cos x$ and $g(x) = \sin 2x$, for the interval $-90^\circ \leq x \leq 180^\circ$.

Show the coordinates of the turning points and all axis intercepts. (5)

3.2 Study the following sketch and determine the value of $\cos \theta - \cos \phi$, without the use of a calculator.



(5)
[10]

QUESTION 4

In the diagram below, the angle between line AB and the x-axis is β . The angle between line CD and the x-axis is θ . A and D are the x-axis intercept points for lines AB and CD respectively. The coordinates of point B are $(\sqrt{3}, 2)$.

The intercept point E, of lines AB and CD lies on the y-axis. $\angle EDC = 63,69^\circ$

The equation of the line CD is given as: $3x + 2y = 6$



4.1 Determine the coordinates of E. (2)

4.2 Calculate the numerical value of α . (2)

4.3 Calculate the numerical value of β . (2)

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Oswaal Editorial Board



Maths Paper Grade 1 november :

GCSE Mathematics - A Pocket Guide for Re-takers and Adults Mick Price, 2024-05-24 As its title suggests this book by been devised by author Mick Price as an essential guide for those revisiting Mathematics at GCSE level Crafted from years of experience and class tested materials it serves as a unique revision tool tailored for both FE college students and adults seeking to improve their previous grades or refresh long forgotten knowledge Stripping back the complexities of mathematics this book focuses on the fundamentals needed to achieve a grade 4 without overwhelming its readers with the entirety of KS4 content GCSE Mathematics promises accessibility and convenience making it an indispensable companion for both classroom learning and self study Inside you ll find a blend of theoretical essentials practical real life examples and exercises designed for both younger and more mature learners all presented in a straightforward uncondescending manner GCSE Mathematics is not just a book it s a tool for success always within reach **Resources in Education** ,2001-10

GCSE Maths David Bowles, Paul Metcalf, 2002 Written specifically for the Foundation and Intermediate tier GCSE for the AQA Modular GCSE Specification B This clearly presented book will help all students looking to achieve a grade C in GCSE maths An ideal stand alone resource for students doing the GCSE course in one year including students resitting modules

Daily Graphic Sam Clegg, 1992-11-04 **Primary Mathematics for Trainee Teachers** Marcus Witt, 2014-11-19 With chapter sequencing following the new Curriculum this book supports trainee Primary school teachers to make use of the opportunities presented in the new National Curriculum for effective and engaging Mathematics teaching Covering all of the areas of the new Curriculum for primary mathematics and offering insight into effective teaching this book helps students connect what they need to teach with how it can be taught Exploring opportunities in the new curriculum for creative and imaginative teaching it shows readers how to capitalize on opportunities to develop children s reasoning and problem solving skills It explores how to make links between mathematics and children s lived experiences to enhance their learning and enables trainees to develop an ability to plan with discernment making the most of existing thinking and research as well as building confidence in adapting and customizing ideas Includes the full National Curriculum Programme of Study for Maths key stages 1 and 2 as a useful reference for trainee teachers Other books in this series include Primary English for Trainee Teachers **Pratiyogita Darpan** ,2007-12 Pratiyogita Darpan monthly magazine is India s largest read General Knowledge and Current Affairs Magazine Pratiyogita Darpan English monthly magazine is known for quality content on General Knowledge and Current Affairs Topics ranging from national and international news issues personality development interviews of examination toppers articles write up on topics like career economy history public administration geography polity social environment scientific legal etc solved papers of various examinations Essay and debate contest Quiz and knowledge testing features are covered every month in this magazine *Editor & Publisher* ,1925 **Helping Children Learn Mathematics, 5th Australian Edition** Robert Reys, Mary Lindquist, Diana V. Lambdin, Nancy L. Smith, Anna

Rogers, Leicha Bragg, Audrey Cooke, Melissa Fanshawe, Mark Gronow, 2025-10-10 **Resources in Education** ,1997

Complete Book of Colleges, 2005 Edition Princeton Review (Firm), 2004-07-20 Up to date information on 1 780 colleges and universities **The Journal of Education** ,1919 **Journal of Gas Lighting** ,1926 Oswaal ICSE 10 Sample Question Papers Class 10 (Set of 6 Books) Physics, Chemistry, Biology, Maths, English Paper 1 & 2 For 2025 Board Exam (Based On The Latest CISCE/ICSE Specimen Paper) Oswaal Editorial Board, 2024-09-09 Description of the product Fresh Relevant with the Latest ICSE Specimen Paper 2025 Score Boosting Insights with 450 Questions 250 Concepts approx Insider Tips Techniques with On Tips Notes Mind Maps Mnemonics Exam Ready Practice with 5 Solved 5 Self Assessment Papers with Hints Online Courses with Oswaal 360 Courses and sample Papers to enrich the learning journey further Strictly as per the Latest Syllabus Specimen Paper 2025 Issued by CISCE Includes Competency Focused questions based on Bloom s Taxonomy Create Evaluate Analyse Apply Understand and Remember Official Marking Scheme Decoded **Teaching Community School Mathematics** Barbara Miller-Souviney, 1981 □□□□□□□□□□ Frank Joseph Shulman, Anna See Ping Leon Shulman, 2001-01-01 A descriptively annotated multidisciplinary cross referenced and extensively indexed guide to 2 395 dissertations that are concerned either in whole or in part with Hong Kong and with Hong Kong Chinese students and emigres throughout the world *Getting Schools Working* Nick Taylor, Johan Muller, Penny Vinjevold, 2003 A systematic review of research projects into the state of education in South Africa **ICT Education** Richard J. Barnett, Daniel B. le Roux, Douglas A. Parry, Bruce W. Watson, 2022-12-07 This book constitutes the refereed proceedings of the 51st Annual Conference of the Southern African Computer Lecturers Association SACLA 2022 held in Cape Town South Africa during July 21 22 2022 The 10 full papers were included in this book were carefully reviewed and selected from 31 submissions They were organized in topical sections as follows curriculum assessment teaching in context innovative teaching and pandemic pedagogy **Ebony** ,2005-09 EBONY is the flagship magazine of Johnson Publishing Founded in 1945 by John H Johnson it still maintains the highest global circulation of any African American focused magazine **Research for Educational Change** Jill Adler, Anna Sfard, 2016-06-17 Research for Educational Change presents ways in which educational research can fulfil its commitments to educational practice Focussing its discussion within the context of mathematics education it argues that while research generated insights can have beneficial effects on learning and teaching the question of how these effects are to be generated and sustained is far from evident The question of how to turn research into educational improvement is discussed here in the context of learning and teaching hindered by poverty and social injustice In the first part of the book four teams of researchers use different methodologies while analysing the same corpus of data collected in a South African mathematics classroom In the second part each of these teams makes a specific proposal about what can be done and how so that its research generated insights have a tangible beneficial impact on what is happening in mathematical classrooms Combining two discourses that of researchers speaking to one another and that of researchers communicating their insights

to those responsible for educational practice the book deals with the perennial question of communication between those who study educational processes and those who are directly responsible for teacher education educational research and classroom practices This book will be key reading for postgraduates researchers and academics in education and particularly in the areas of mathematics education education research teacher education and classroom practice It will also appeal to teacher educators practitioners and undergraduate students interested in educational research **The English**

Baccalaureate Great Britain: Parliament: House of Commons: Education Committee, 2011-07-28 This report suggests that any new performance or curriculum measures affecting schools should only be implemented after proper consultation with key stakeholders and the wider public something which didn't happen with the English Baccalaureate EBac The Committee says that the Government should also have waited until after the conclusion of the National Curriculum Review before introducing the EBac They want the Government to deliver on its promise in the White Paper The Importance of Teaching to use performance tables to put greater emphasis on the progress of every child The report notes that certain academic subjects studied at A level are more valued by Russell Group universities than others but argues that a focus on a fairly narrow range of subjects demanding considerable curriculum time is likely to have negative consequences on the uptake of other subjects The Committee does not make recommendations on which subjects should or should not be included but rather encourages the Government to reconsider the EBac's composition when the National Curriculum Review is concluded The Government should confirm how it will monitor the attainment of children on free school meals in the EBac The report also calls for further international evidence to inform debate on the merits of the EBac evidence the inquiry received did not suggest a link in other countries between the prescribed study of certain academic subjects and improved attainment and prospects for poorer students Elsewhere the report argues that the current arrangements for certification of the EBac should be shelved as should calls for a Technical Baccalaureate to sit alongside the existing award

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