

Subject – Math AI (Standard Level)
Topic - Geometry and Trigonometry
Year - May 2021 – Nov 2022
Paper -1
Answers

Question 1

(a) $\frac{3-1}{7-3}$ (M1)
 $= 0.5$ A1
[2 marks]

(b) $y-2 = -2(x-5)$ (A1)(M1)

Note: Award (A1) for their -2 seen, award (M1) for the correct substitution of (5, 2) and their normal gradient in equation of a line.

$2x + y - 12 = 0$ A1
[3 marks]

(c) every point in the cell is closer to E than any other snow shelter A1
[1 mark]

Total [6 marks]

Question 2

(a) $135^\circ \times \frac{12\pi}{360^\circ}$ (M1)(A1)
 14.1 (m) (14.1371...) A1
[3 marks]

(b) evidence of splitting region into two areas (M1)
 $135^\circ \times \frac{\pi 6^2}{360^\circ} - \frac{6 \times 6 \times \sin 135^\circ}{2}$ (M1)(M1)
 $42.41115... - 12.7279...$
 29.7 m^2 (29.6835...) A1
[4 marks]
Total [7 marks]

Math Sl Paper 1 2013 Answer Key

N Colangelo



Math SI Paper 1 2013 Answer Key:

Process Data in Educational and Psychological Measurement, 2nd Edition Hong Jiao, Qiwei He, Bernard Veldkamp, 2021-12-13 Publisher's note In this 2nd edition The following article has been added Jiao H He Q and Veldkamp BP 2021 Editorial Process Data in Educational and Psychological Measurement *Front Psychol* 12 793399 doi 10 3389 fpsyg 2021 793399 The following article has been added Reis Costa D Bolsinova M Tijnstra J and Andersson B 2021 Improving the Precision of Ability Estimates Using Time On Task Variables Insights From the PISA 2012 Computer Based Assessment of Mathematics *Front Psychol* 12 579128 doi 10 3389 fpsyg 2021 579128 The following article has been removed Minghui L Lei H Xiaomeng C and Potm ilc M 2018 Teacher Efficacy Work Engagement and Social Support Among Chinese Special Education School Teachers *Front Psychol* 9 648 doi 10 3389 fpsyg 2018 00648 [More Trouble with Maths](#) Steve Chinn, 2020-03-24 Now in an updated third edition this invaluable resource takes a practical and accessible approach to identifying and diagnosing many of the factors that contribute to mathematical learning difficulties and dyscalculia Using a combination of formative and summative approaches it provides a range of norm referenced standardised tests and diagnostic activities each designed to reveal common error patterns and misconceptions in order to form a basis for intervention Revised to reflect developments in the understanding of learning difficulties in mathematics the book gives a diagnostic overview of a range of challenges to mathematical learning including difficulties in grasping and retaining facts problems with mathematics vocabulary and maths anxiety Key features of this book include Photocopiable tests and activities designed to be presented in a low stress way Guidance on the interpretation of data allowing diagnosis and assessment to become integrated into everyday teaching Sample reports showing the diagnostic tests in practice Drawing on tried and tested methods as well as the author's extensive experience and expertise this book is written in an engaging and user friendly style It is a vital resource for anyone who wants to accurately identify the depth and nature of mathematical learning difficulties and dyscalculia *Making Education Work for the Poor* William Elliott, Melinda Lewis, 2018-07-03 Making Education Work for the Poor identifies wealth inequality as the gravest threat to the American education system Today wealth rather than individuals effort and ability determines educational outcomes This book calls for universal Opportunity Investment Accounts to be the cornerstone of the wealth building agenda the nation needs to salvage the American Dream *Security with Intelligent Computing and Big-Data Services 2019* Lakhmi C. Jain, Sheng-Lung Peng, Shih-Jeng Wang, 2020-04-27 This book aims to attract researchers and practitioners who are working in Information Technology and Computer Science This edited book is about basics and high level concepts regarding Blockchain Technology and Application Multimedia Security Information Processing Security of Network Cloud and IoT Cryptography and Cryptosystem Learning and Intelligent Computing Information Hiding It is becoming increasingly important to develop adaptive intelligent computing centric energy aware secure and privacy aware mechanisms in high performance computing and IoT applications

The book serves as a useful guide for industry persons and also helps beginners to learn things from basic to advance in the area of better computing paradigm Our aim is intended to provide a platform for researchers engineers academicians as well as industrial professionals from all over the world to present their research results in security related areas We believe that this volume not only presents novel and interesting ideas but also will stimulate interesting discussions from the participants and inspire new ideas

Automation 2023: Key Challenges in Automation, Robotics and Measurement Techniques Roman Szewczyk,Cezary Zieliński,Małgorzata Kaliczyńska,Vytautas Bučinskas,2023-02-04 This volume presents the results of recent research which supports the postulated transformation It contains papers written by both scientists and engineers dealing with diverse aspects of measuring techniques robotics mechatronics systems control industrial automation numerical modelling and simulation as well as application of artificial intelligence techniques required by the transformation of the industry towards the Industry 4 0 We strongly believe that the solutions and guidelines presented in this volume will be useful for both researchers and engineers solving problems that have emerged during the recent crisis

Conference Proceedings of 2021 International Joint Conference on Energy, Electrical and Power Engineering Wenping Cao,Cungang Hu,Xiaoyan Huang,Xiangping Chen,Jun Tao,2022-10-12 This book will be a collection of the papers presented in the 2021 International Joint Conference on Energy Electrical and Power Engineering CoEEPE 21 covering new and renewable energy electrical and power engineering It is expected to report the latest technological developments in the fields developed by academic researchers and industrial practitioners with a focus on component design optimization and control algorithms in electrical and power engineering systems The applications and dissemination of these technologies will benefit research society as new research directions are getting more and more inter disciplinary which require researchers from different research areas to come together and form ideas jointly It will also benefit the electrical engineering and power industry as we are now experiencing a new wave of industrial revelation that is electrification intelligentization and digitalisation of our transport manufacturing process and way of thinking

Gesture-Speech Integration: Combining Gesture and Speech to Create Understanding Naomi Sweller,Kazuki Sekine,Autumn Hostetter,2021-09-14

Scientific Influences on Early Childhood Education Dominic F. Gullo,M. Elizabeth Graue,2020-04-23 Scientific Influences on Early Childhood Education offers a new framework for examining the diverse scientific perspectives that shape early childhood education As the field takes on an increasing role in addressing children s educational developmental and environmental needs it is critical to more fully understand and appreciate the diverse scientific roots of contemporary early childhood education This edited collection brings together leading researchers to explain and unpack perspectives that are not often associated with early childhood education yet have made significant contributions to its development and evolution Essential reading for anyone working with young children this critical and insightful text illuminates the connections between our social values science and research in the field

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Math Sl Paper 1 2013 Answer Key Book Review: Unveiling the Magic of Language

In a digital era where connections and knowledge reign supreme, the enchanting power of language has are more apparent than ever. Its power to stir emotions, provoke thought, and instigate transformation is really remarkable. This extraordinary book, aptly titled "**Math Sl Paper 1 2013 Answer Key**," written by a very acclaimed author, immerses readers in a captivating exploration of the significance of language and its profound affect our existence. Throughout this critique, we will delve to the book is central themes, evaluate its unique writing style, and assess its overall influence on its readership.

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web the design is complete for pre stressing cables end anchorages un tensioned reinforcements end cross girder shear connectors 3 0 general this chapter emphasizes on introducing the typical process of designing deck girder superstructure of pre stressed concrete bridge along with the consideration that a design engineer needs to take

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web v i r i v r as you can see in this circuit diagram we use an r1 load resistor to convert current into voltage in this circuit a voltage divider is used but we can also use an operational amplifier to step down the voltage across the load resistor how to measure the secondary side current of ct

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web you mean with a microcontroller the impedance note about analog sources probably means that if the sources are higher than 2 5k the input on the pic will start to load them down you usually want a source impedance to be at least ten times smaller than the load impedance so that it is not disturbed by the load impedance

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web the pic micro reads the input voltage through one of the 8 analog channels and convert it to a 10 bit digital number using the internal adc doing some math with adc conversion you will see later this number can be converted to the actual measured voltage the voltage is displayed in an hd44780 based character lcd

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web the pic18f4520 is a 40pin microcontroller with numerous functions and applications one of its many functions is analog to digital conversion through this the pic is capable of reading an analog voltage and turning it into a digital readout that can be used in a program the circuitry and code required to create a basic voltage sensor is minimal

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web the circuit diagram of three phase voltage measurement system is given below as you can see in the circuit diagram we are using three phase generator and the voltage of each phase is measuring with the same circuit phase one phase two and

phase the measurement circuit are the same

how to measure mains ac voltage with an adc from a microcontroller - Oct 05 2022

web jul 6 2016 i want to measure the mains voltage 230v 50hz using an adc channel from a microcontroller this is my current approach below i have two schematics that add two voltages one direct one alternating added to that the both the ac and dc signals are going through voltage divider but that isn't important

digital voltmeter using pic microcontroller project and circuit - May 12 2023

web digital voltmeter using pic microcontroller in this project a digital voltmeter using pic microcontroller is designed digital voltmeter using a pic can read the voltage from 0 40 volt this voltmeter can read only dc voltage digital ac voltmeter can also be designed using microcontrollers