

7 - 11 July 2014

Kimberley - Northern Cape

2014



demystifying mathematics

ACADEMIC PROGRAMME



Inside Front Cover

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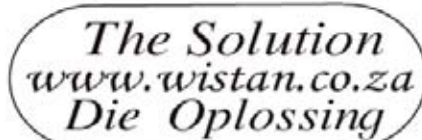
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Message from the AMESA President



Welcome all to our annual national congress!

The AMESA Council views our national congress, and indeed our regional congresses, as the prime engine to achieve AMESA's objective to enhance the quality of the teaching and learning of mathematics.

We are a very diverse audience, including classroom teachers from all phases who are at the chalk face of teaching, mathematics curriculum advisors and education department officials who support teachers, University, NGO and project personnel involved in pre-service and in-service mathematics teacher education, researchers, and vendors. These different groups come to congress with very different needs and expectations. The Northern Cape Local Organising

Committee has planned a rich programme to cater for all these different needs and expectations, and I trust that we will all find the congress exciting and fruitful in our different ways.

I particularly want to warmly welcome our classroom practitioners. I admire that you choose to spend your vacation attending this congress, taking responsibility for your own professional development. You have therefore come to the congress with high expectations, excited, and eager to learn. You will attend many excellent lectures, workshops and discussions, and if you engage I have no doubt that you will learn much about mathematics and the teaching of mathematics from the expert presenters in the formal sessions. However, you will find that you will learn as much from your interaction with peers in informal settings as you do from the formal presentations. If you engage the people and engage our subject of Mathematics, you are becoming part of our community of practice. And that is what congress is all about!

I also want to especially welcome and thank our presenters for sharing their expertise with us. There are two types of presentations: academic (theoretical and research) papers and practitioner (the wisdom of practice, e.g. 'How I teach') papers. The AMESA Council values both and wants to support and develop both types of presentations. Therefore we have implemented a policy that authors of accepted reviewed long papers may choose to publish an extended abstract and not the full paper, enabling them to submit their paper to a journal like *Pythagoras*. This means that the peer interaction and input of congress participants become useful to authors to further improve their academic papers. Similarly, we want to support more practitioners to present at congress and have implemented an explicit strategy to use the review process to support authors to improve their papers, rather than just to evaluate (accept or reject) the proposals. I want to thank the academic programme team, in particular Mandisa Lebitso and Anne Maclean, and our reviewers for investing their time and energy to support our members to publish, as a vehicle to build our knowledge base in Mathematics education.

Again, welcome to all in the mathematics education community, and thank you to all who made the congress possible, in particular Hoërskool Diamantveld for hosting us, and AMESA Northern Cape for their organisation – and I must here single out our Congress Directors Nina Scheepers and Lawrence van Heerden for their leadership and commitment to the task.

I have no doubt that this AMESA Congress 2014 will be a memorable event for all of us.

Alwyn Olivier
President: AMESA

Message from the Congress Director – Northern Cape



Welcome to the Northern Cape and Kimberley in particular. This is also the 21st birthday of AMESA and the beginning of SKA. We therefore have a lot to celebrate and share at this year's Congress.

“Demystifying Mathematics” means that we want to bust the myth that mathematics is for a chosen few. The image that maths is for super intelligent beings must be erased. We have to change the negative attitudes towards maths and open the mystery of number sense. It must be attractive and not cold and austere to be appreciated by all. Do not present mathematics to the faces in front of you, but rather to the intellectual level of the learner and beyond. The minds of the learners must be exploited to challenges in systematizing knowledge. Make mathematics interesting to yourself and it will stimulate the learner to new heights of maths enjoyment. We as educators must appreciate and enjoy the dynamics of maths to ensure that learners appreciate mathematics for what it is.

We hope that you will leave here at the end of the congress as a satisfied and empowered educator. You are the one that can change the mind set of many learners in a vast world of problems. Even if you change only a few you have achieved a lot.

Enjoy this congress and do not be secretive about what you have encountered here. Share this experience and see you next year.

If God permits
Lawrence van Heerden

Message from the AMESA Northern Cape Chairperson

20th Annual National Congress of AMESA Theme: Demystifying Mathematics



In 2005 the Northern Cape had the honour and pleasure to host the 11th Annual National Congress of AMESA here in Kimberley. Since then, so much has changed and the province now has its own university! The challenges facing the province with the exodus of academics and students to other provinces will, hopefully, now be a thing of the past.

The demands made on AMESA to make a meaningful contribution in improving the quality of mathematics education in South Africa, will always be there for us to meet. We are confident that the deliberations at this 20th Annual Congress will continue to improve our competitiveness globally and justify the generous investment by government and other stakeholders in mathematics education in South Africa. Your active participation in all activities of congress will ensure that AMESA continues to impact positively on the state of mathematics education in South Africa!

The city of Kimberley, with its unique hospitality, provides an opportunity for everyone attending this congress to deliberate in a relaxed atmosphere. Several places of interest have been arranged for you to visit in the excursion itinerary and we hope that you will also enjoy the cultural and banquet evenings.

AMESA Northern Cape welcomes you heartily and wishes you an exciting and rewarding congress.

Peter Manzana
Chairperson: AMESA Northern Cape

Message from the Interim Head, Sol Plaatje University



To the Delegates of the 2014 AMESA Congress – Kimberley

I take this opportunity to welcome you - both to your Congress and to Kimberley. For those of you who are from outside of Kimberley and the Northern Cape, since this is a part of the Cradle of Humankind, Welcome Home!

There are two aspects of your gathering that speak directly to our ability to deliver on the commitment that we make to the yet unborn – “teaching” and “mathematics”. Undoubtedly, one of apartheid’s greatest harm was its characteristic of interfering in the relationship between those who wished to teach and those who wished to learn.

Committed teachers like yourselves accept the burden of repairing this untold damage – a task that many of your fellow citizens do not have the courage to rise to.

Teaching mathematics is an added difficulty. The base of mathematics and scientific literacy in our country is low and the need is very high. But this need is more than simply to increase the numbers of people who enter science, engineering and technology disciplines. As a branch of philosophy, mathematics gives citizens access to forms of reasoning that enables them to challenge the dogmas of the powerful and to second-guess the unintended consequences of policy decisions – essential habits of citizens in a healthy and functioning democracy. My sense is that your primary purpose lies in contributing to development of positive citizenship in our country.

I wish you well with your deliberations and I pray that you will draw much from the clash of ideas with your colleagues – and from your visit to Kimberley. Sol Plaatje University looks forward to welcoming you back in the near future.

Prof Yunus Ballim
Interim Head
Sol Plaatje University

Message from the Head, Northern Cape Education Department



From 7 to 11 July 2014, delegates of the Mathematics teaching fraternity countrywide will descend on Kimberley to celebrate Diamond AMESA. To these delegates the diamonds of the event I extend a very warm welcome. Your choice of career makes you special.

Given the SKA, and the mushrooming of solar plants throughout the province, the Northern Cape is, universally, a special destination of choice. The Square Kilometre Array (SKA) project in Carnarvon and Williston is significant because it is from there that you are able to hear the furthest (50 light years) sound in the entire universe! Some SKA personnel are gracing us here with their presence, both as residents of this province, as well as esteemed delegates to this congress. Their activities here at congress will not only showcase their work but also the global significance of our province.

The Northern Cape occupies a special place on the globe due to its special location and topography. This is evident from the activities of the Bloodhound SSC project, which singles out Hakskeenpan near Upington as an optimal venue for their activities. Hakskeenpan is where the Mathematician, Andy Green, a keynote speaker at this congress, will be driving the fastest car in an attempt to break the fastest recorded land speed of 1609km per hour!

Ladies and gentlemen, mining operations in our province are not only confined to diamonds. Iron ore and manganese are key economic stimulants in the Northern Cape Province. The Diamond AMESA is thus our opportunity to mine the diamond in you, by developing great teachers who will, in turn, grow, nurture and support our potential.

South Africa is a destination of choice today because we are also hosts to the International Mathematics Olympiad this year. Mathematics boffins from all over the world will be finding their way to the southern tip of Africa to test their prowess in mathematics and mathematics teaching.

Kimberley is a special city with the biggest human made hole on earth, the first electrified street lights, and perhaps more interestingly from a history of mathematics point of view, for hosting arguably, the oldest evidence of counting in the world! This is evidenced in the form of a small baboon bone, notched with 29 neat scratches, at the McGregor Museum, not far from our congress venue.

Diamond AMESA is a priority to the NCDOE, and that is why we chose to sponsor over 300 teachers and Subject Advisors for this occasion. We want to build capacity for a vibrant source of good mathematics teaching and learning. Our budget for this specific event is over 1.5 million rand.

Diamond AMESA is part of our teacher development strategy. Progress has been made with the implementation of the Integrated Strategic Planning Framework for Teacher Education and Development in South Africa (2011-2025). The Northern Cape Department of Education will introduce a Teacher Development Institute as per prescripts of the Framework. This institute will form an integral part of the Sol Plaatje University.

The Provincial Teacher Development Institute will play a pivotal role in this regard.

The following programmes will be implemented:

- Career-long professional learning and development.
- Interventions to improve teacher classroom practice and the delivery of school-based assessment.
- User-friendly diagnostic tests for teachers to assess their professional competence.
- Bringing together expertise from various education entities to develop appropriate courses for teachers.
- Increase the number of MST Teachers through various advocacy programmes in collaboration with the Sol Plaatje University.
- Introduction of incentive schemes for excellence in implementing MST: good results, learner participation in MST projects, Expos, Maths Olympiads, etc. in collaboration with donors through sponsorships.

Like the emerging teacher development institute and the Sol Plaatje University, the AMESA congress in Kimberley, through the addition of more mathematics educators concentrated in a very small radius within our city, will boost the growing knowledge of our citizens.

We, as the department, are keen to see AMESA growing in the province. We are honoured to welcome you, diamonds of our city, whose eagerness to engage in their subject and concern for the child, outweigh the cold weather and personal comfort. I salute you on behalf of the Northern Cape Department of Education.

Mr G.T. Pharasi
Head of Department, Northern Cape Education Department

Message from the Principal, Hoërskool Diamantveld



Word of Welcome from the Principal

At Hoërskool Diamantveld we live and work by our school values, which coincidentally resemble mathematical values – for instance, the unequivocal distinction between right and wrong. Therefore we are honoured by the distinguished presence of so many mathematicians on our premises.

You are most welcome at Hoërskool Diamantveld and we wish you all an enriching mathematical experience. Enjoy the sunshine of the Northern Cape Province, the warm hospitality of Kimberley and the fine academic atmosphere of Hoërskool Diamantveld. The school has produced some fine mathematicians in the past. Rest assured that you are making an impact on young lives. The anonymous poem below proves that learners apply mathematics to their everyday lives and try to make sense of their world in mathematical terms.

May our school slogan, A Posse ad Esse (From a Possibility to a Reality) apply to all participants this week.

MARETH HUGO
Principal, Hoërskool Diamantveld

Just Some High School Math Problem

*i am a possibility
of many possibilities
i am a ratio
an indecisive factor
in the rest of what this dimension has to offer*

*the world is a top
i spin it and predict the probability
that the end will equal the means
or perhaps surpass it
even if I never surpass this muck-up
these broken eardrums
and the inquisition of my empty head exclaiming empty words*

Provide for their dreams

even when you're no longer there

Get an Old Mutual Life Plan today and your loved ones can receive from R50 000 up to R500 000 so that they can cope financially.

Other benefits include access to Old Mutual Family Support Services like:

- Health Support
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Leave your family financially secure by SMSing LIFE to 31278 and an Old Mutual Financial Adviser will call you.



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SMS LIFE to 31278 - SMS charged at R1.50 | www.oldmutual.co.za

Plenary Speakers



Andy Green (UK) is a Wing Commander in the Royal Air Force. The Royal Air Force sponsored him through Oxford University, where he gained a First in Mathematics. Three years later, qualified as a fighter pilot, he flew the F4 Phantom in Germany at the end of the Cold War. Andy is currently working in the Royal Air Force Headquarters, supporting operations around the globe.

Andy is a member of a Land Speed Record team. In 1997 he drove the Thrust SuperSonic Car to the current World Land Speed Record of 1 228 km/h (Mach 1.013). Andy is currently involved with the development of the BLOODHOUND SuperSonic Car, aiming to exceed the incredible target of 1000 mph (1 610 km/h). The team will be bringing the car to South Africa in 2015 to attempt the new record on Hakskeenpan in the Northern Cape.

The development of the car has been about the use of mathematics, where the team, supported by universities and research organisations, have to push the boundaries of our engineering, manufacturing and materials knowledge. However, the BLOODHOUND Project is not primarily about speed. Rather, it is an international education initiative aimed at inspiring the next generation of young scientists, engineers and mathematicians by demonstrating these subjects in the most exciting way possible.



Ingrid Rewitzky (SA) obtained a BSc degree with distinction from Rhodes University in 1988, and in 1989 a BSc Honours in Mathematics, also with distinction. Having developed an interest in Mathematics of Computer Science, she moved to the University of Cape Town (UCT), where she was awarded an MSc in Mathematics with distinction in 1991, and a PhD in 1995. She was invited as Research Fellow at the Mathematical Institute and the Computing Laboratory of the University of Oxford in 1996.

In 1998 Ingrid was appointed as a lecturer at UCT and was promoted to senior lecturer in 2003. In 2005 she was appointed associate professor at Stellenbosch University, and in June 2009 she was promoted to full Professor of Mathematics. She continued promoting the interaction between mathematics and computer science, and has also been instrumental in establishing an interdisciplinary biomathematics programme. She is an editorial board member of the Journal on Rough Set Methods and an associate editor of *Quaestiones Mathematicae*. Ingrid currently is the Executive Head of the Department of Mathematical Sciences, and the Vice-Dean (Teaching) of the Faculty of Science.



Rajendran Govender (SA) is currently a senior lecturer in the School of Science and Mathematics Education in the Faculty of Education at the University of the Western Cape. Rajendran started teaching school mathematics in 1985, became a college mathematics lecturer in 1995 and in 2002 he became a subject advisor of Mathematics in KwaZulu-Natal. In 2003 he joined the University of Limpopo as a mathematics education lecturer, and in 2008 took up the post of mathematics education lecturer at UWC.

Rajendran is a member of SAARMSTE, UMALUSI external moderator for Mathematics, and he represents AMESA on the SAMF Advisory Committee on Mathematics. He is also an associate editor of the *Pythagoras* journal. He recently completed his doctorate in Mathematics Education. His core areas of research embrace reasoning, defining, generalising and justifying within the domain of Mathematics Education.

Plenary Speakers continued



Anne Maclean (SA) completed her teaching degree at Rhodes University in 1980. Since then she has been involved in teaching mathematics in the former Transkei at Mt Nicholas School in Libode and at Sacred Heart Secondary School in Verulam, KZN, where she also served as principal for 10 years. Thereafter she spent 2 years as principal of St Benedict's School in Pinetown before being invited to the Northern Cape to serve as Mathematics Coordinator. She currently is the Managing Director of the Maths and Science Leadership Academy in Kimberley.

Anne's passions are mathematics, music and the youth! It is out of these passions that she initiated the Maths and Science Leadership Academy NPC in Kimberley in 2006.



Vimolan Mudaly (SA) is currently senior lecturer in Mathematics Education in the School of Science, Mathematics and Technology Education in the Faculty of Education at the University of KwaZulu-Natal.

Vimolan completed his teaching degree in 1987 at the University of Durban-Westville. Whilst teaching for 17 years at various secondary schools, he completed his BEd (Hons) through the University of South Africa, MEd (Cum Laude) at the University of Durban-Westville and his DEd at the University of KwaZulu-Natal.

In 2003 Vimolan joined the School of Science, Mathematics and Technology Education in the Faculty of Education as a lecturer. His research is currently focused on the teaching and learning of mathematics and more specifically in the field of visualisation and proof. Vimolan is the current Chairperson of AMESA in KZN.

Plenary Panel Discussions

The plenary panel discussions promote incisive debate on topical issues in the mathematics education field with invited key players who can open up insights that are valuable for the community to engage with and question.

Panel 1: *Is mathematics pre-service teacher education delivering?*



Chair: Hamsa Venkat

Panelists: Nick Taylor, Batseba Mofolo-Mbokane and Vimolan Mudaly

In a context of on-going low mathematical performance at all phases of schooling, there is increasingly critical commentary on what pre-service mathematics teacher education is doing to improve mathematics teaching.

Panel 2: *Is the new CAPS curriculum delivering?*



Chair: Nico Govender

Panelists: Werner Olivier, Giel du Toit, Rajen Govender

Is the prescription of content, sequence and pace in CAPS enhancing or constraining teaching and learning?

Local Organising Committee

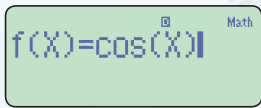
Congress Director:	Lawrence van Heerden
Congress Co-director:	Nina Scheepers
Academic Coordinator & Team:	Mandisa Lebitso Anne Maclean
Program Committee:	Mandisa Lebitso Anne Maclean Wendy Maxwell
Activity Centre:	Patty Whitten
Treasurers:	Andre van Zyl Rebecca Maduo
Congress Secretary:	Nombulelo Mandindi
Administrative Assistant:	Hettie Streuders
Sponsorship:	Alwyn Olivier
Exhibitions:	Patty Whitten
Presenters & Venues:	Nina Scheepers
Transport:	Vincent Botha Floyd Leshoro Bronwyn Muller
Registration:	Donald Katz Bukelwa Xabela Nyebe Mohale ST Kgakane Lawrence Blanckenberg André van Zyl
Accommodation:	Gwen Pharasi
Social Programme:	Patty Whitten Hester Burrows Wendy Maxwell
Memorabilia:	Olga Mancwe
Host for Plenary Speakers:	Nina Scheepers
Opening & Closing Ceremonies:	Adade Boachie-Yiadom Donald Katz

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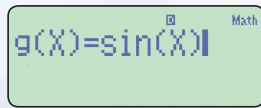
The Learning Tool of Choice.

Developed in Collaboration with South African
Educators for the SA Syllabus

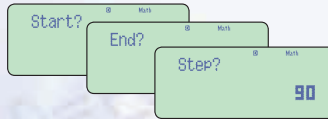
Natural Textbook Display Scientific Calculator
Now with Dual Table Function



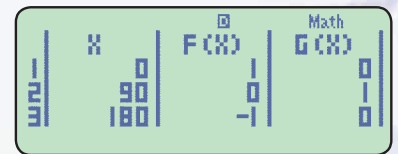
Formula registration



2nd formula registration

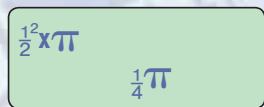


Start/End/Set up values

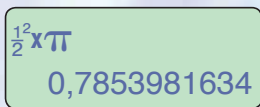


Resultant dual table

Plus Dual Result Function



Math result format



Linear result format

Results can be expressed in standard form or decimal

Includes These Important Functions

- Previous answer key for recursive functions
- 9 memories
- Statistics – data handling and regression analysis
- Random integers for statistics
- Prime factorisation
- Time conversion calculations
- Co-ordinate transformation – enhanced by dual table function
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Plus another 246 functions



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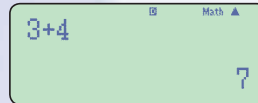
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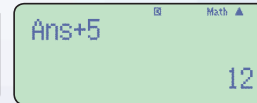
Plus Dual Answer Key to show your previous answer

3 + 4 =



Answer = 7

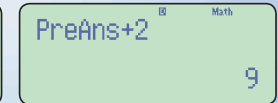
Answer+5=



Answer = 12

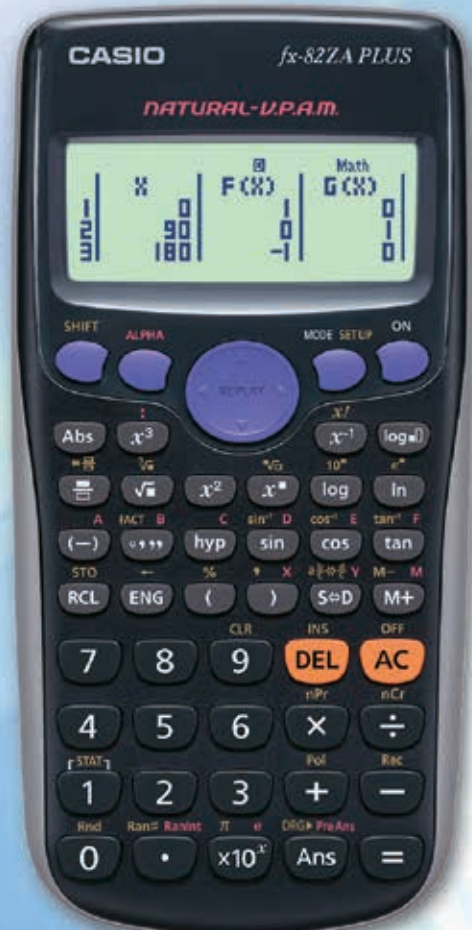
Previous Answer = 7

Previous Answer+2=



Answer = 9

Previous Answer = 12



General Information

Registration

The registration desks are located in **rooms 1, 2 & 3**.

Membership desk

The AMESA Congress is for members only. Visit the AMESA congress secretary, **Nombulelo Mandindi**, at the membership desk in **Room 3B** (next to the main entrance) for all membership enquiries.

Information desk

Visit the Information Desk in **Room 3A** (next to the main entrance) if you feel lost or if you need anything. Daily announcements will be available at the Information Desk.

Presenters support room

Visit Room 23 for assistance with presentations.

Name tags

Please note that it is compulsory for participants to wear their name tags at all times for access to academic sessions, exhibitions, excursions, hostel accommodation, transport meals, teas, etc. You will be asked for identification.

Transport

Participants who stay in guest houses and hotels arrange their own transport. Transport will be provided to and from school hostels to Hoërskool Diamantveld where this is needed. For enquiries contact the Information Desk.

Tea and meals

Tea will be served in the quad.

Breakfast for all hostel guests will be served at the hostels from 07:00 until 07:30.

Lunch will be served in the JP Auret Hostel, next to the school.

People with special dietary needs will go for lunch at Dugmore House.

Wednesday lunch packs will be handed out at the school in front of **Room 22**.

Cell phones

Please switch off your cell phone during sessions.

Punctuality and venue limits

Please be punctual for all sessions. Workshop venues can accommodate 30 participants. Please understand that when capacity is reached, session chairs and AMESA Ambassadors **WILL NOT ALLOW MORE PEOPLE TO ENTER**.

Equipment

Presenters should check their booked equipment (data projectors, overhead projectors, computer laboratories, etc.) and pre-load before their sessions. Enquiries should be directed to Theo Bosch in Room 23.

076 391 6898

Computer sessions

Computer workshops will be held in Room 15.

Evening social functions

Day	Time	Event	Venue	
Monday	18:30	Welcome Dinner	Mittah Seperepere Convention Centre	(Free with name tag)
Tuesday	18:30	Cultural Evening	Mittah Seperepere Convention Centre	(R120 per person)
Thursday	19:00	Gala Dinner	Mittah Seperepere Convention Centre	(R350 per person)

A cash bar will be available at the Mittah Seperepere Convention Centre.

General Information continued

Emergency numbers

H/S Diamantveld:

Help desk number 083 755 5025

Kimberley emergency numbers:

Police Services: 10111
Ambulance Services: 053 802 9111
Er24: 084 124 (Manager: Albert Hensberg 084 653 7593)
Netcare: 082 911 (Manager: Nati Fourie 081 025 9394)
Fire Department: 053 832 4211
Roads & Stormwater: 053 830 6836
Electrical: 053 830 6442

IN CASE OF AN EMERGENCY

Medicross:

(medical practitioners, dentists, pharmacy, radiology, pathology)
Cnr of Stone and Long Street: 28°44'37.5"S 24°45'27.0"E
Tel: 053 830 4200

Hospital:

Curomed Medi-Clinic (24 hour emergency service)
177 Du Toitspan Road
Tel: 053 838 1111

Ambulance:

ER24 Emergency contact number: 084 124

Other Numbers

We provide for your convenience contact details of:

Taxi companies:

Rikki's Taxis: 053 832 1764 / 082 954 0854 / 083 342 2533 / bookings@rikkistaxis.co.za
Cupido Taxis: 074 649 4480 / 082 929 6573 / 053 873 1509
Mothibi Taxis: 083 233 3511 / 083 879 5155
Piet Badenhorst: 072 782 6701
Johnson taxis: 076 054 6830
Jonathan Gilbert: 076 478 3768

Mr Delivery: 086 185 8591

The Venue



Macmillan Activity Centre

ITSI E-learning Room	17
Bloodhound SSC Room	18
Activities Room	19
Computer Lab	15

Other

Information desk	3A
Registration Desks	1, 2 and 3

Exhibitions

Spangenberg Hall

MACMILLAN

MATHS the Macmillan way

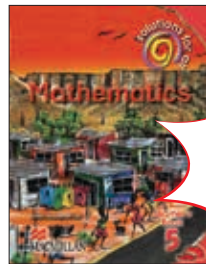
Foundation Phase



The *Solutions for all Mathematics Grades 1–3* course is available in Afrikaans, isiNdebele, Sesotho, Setswana, Siswati, Tshivenda and Xitsonga.

The *Takalani Sesame Mathematics Grades 1–3* course is available in Setswana.

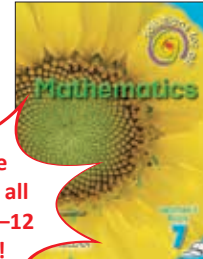
Intermediate Phase



The *Solutions for all Mathematics Grades 4–6* course is available in English and Afrikaans.

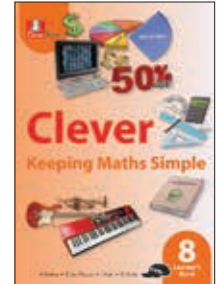
eBooks are available for all our Grades 1–12 core titles!

Senior Phase

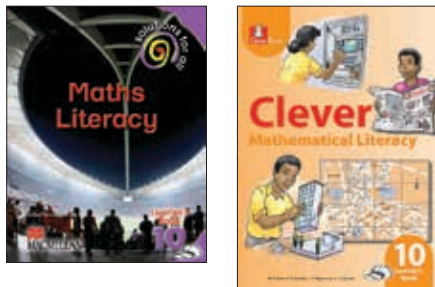


The *Solutions for all Mathematics Grades 7–9* course is available in English.

The *Clever Keeping Maths Simple Grades 7–9* course is available in English.



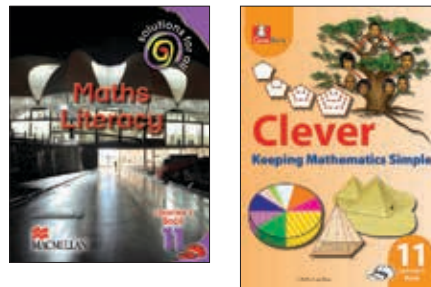
Grade 10



The *Solutions for all Maths Literacy Grade 10* course is available in English and Afrikaans.

The *Clever Mathematical Literacy Grade 10* course is available in English.

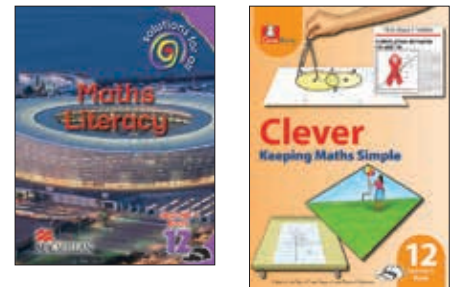
Grade 11



The *Solutions for all Maths Literacy Grade 11* course is available in English and Afrikaans.

The *Clever Keeping Mathematics Simple Grade 11* course is available in English.

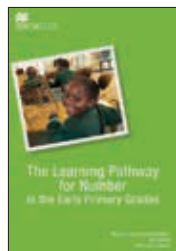
Grade 12



The *Solutions for all Maths Literacy Grade 12* course is available in English.

The *Clever Keeping Mathematics Simple Grade 12* course is available in English and Afrikaans.

Additional Resource Material



The Learning Pathway for Number in the Early Primary Grades (LPN) gives an overview of learners' growth in understanding of whole numbers from preschool to Grade 4. The LPN is the result of a joint project between the University of Cape Town, Utrecht University (Netherlands) and the Cape Peninsula University of Technology.

Mindset/Macmillan Study Guides



The Learn Xtra Live Study Guides (which include a free SD Card) are based on the Learn Xtra Live revision programmes for Grades 10 to 12 that are broadcast throughout the year.

The Learn Xtra Live Maths Literacy Grades 10–12 Study Guide draws on the content from *Solutions for all Maths Literacy Grades 10–12* books published by Macmillan.

The Learn Xtra Live Mathematics Grade 11 Study Guide draws on the content from *Clever Keeping Maths Simple Grade 11* books published by Macmillan.

For further details, contact (086) 100 MIND (6463) or info@mindset.co.za / sales@mindset.co.za



Macmillan Activity Centre Programme

The **Macmillan Activity Centre** has **four** venues:

The **Activity Lab (Room 15)** has 30 computers where you can learn to use software that will transform your mathematics teaching.

In the **ITSI E-Learning Room (Room 17)**, you can discover more about IT School Innovation and the *Personalised Education Framework*. A combination of a WiFi network, tablets and support provides the most effective solution to schools.

In the **Bloodhound SSC Room (Room 18)** you can see what the Bloodhound SSC Education Programme has to offer the mathematics curriculum and what it is like to drive a car at 1 610 km/h and stop safely!

If you would like to “get active”, then visit the **Activities Room (Room 19)**!

Sunday, 06 July	Main Programme	Activity Lab [Room 15]	ITSI E-Learning [Room 17]	Bloodhound SSC [Room 18]	Activities [Room 19]
15:00 – 18:00	Pre-congress workshops	<i>FET: GeoGebra investigations in support of key Geometry results in the curriculum - Werner Olivier & Phil Collett</i>			
Monday, 07 July					
08:00 – 09:45	Registration in Main Hall	Open	ITSI E-learning presentations on the hour	BLOODHOUND SSC driving experience	
08:30 – 09:30	Tea	Open	Open	Open	
10:00 – 11:30	Opening Ceremony				
11:30 – 12:30	Plenary: Rajendran Govender				
13:00 – 14:00	Lunch	Open	Open	Open	
14:00 – 15:00	Parallel Session 1	<i>So you want accurate graphs in your Mathematics Paper? Use Graph.exe software for free - Peter Raadt</i>	ITSI E-learning presentations on the hour	BLOODHOUND SSC driving experience & rocket cars	<i>Rocket car-matics (FP)</i> C Maxwell
15:05 – 16:05					<i>Rocket car-matics (IP)</i> C Maxwell
16:05 – 16:35	Tea	Open	Open	Open	
16:35 – 17:35	Regional Meetings				
18:30	Welcome Dinner				
Tuesday, 08 July					
08:30 – 10:30	Panel Discussion 1				
10:30 – 11:00	Tea	Open	Open	Open	Open
11:00 – 12:15	Plenary: Andy Green				
12:15 – 13:00	MM Casio				
13:00 – 14:00	Lunch	Open	Open	Open	Open
14:00 – 16:00	Parallel Session 2	<i>Using Microsoft Excel to draw accurate ogives, histograms and frequency tables - Peter Raadt</i>	ITSI E-learning presentations on the hour	BLOODHOUND SSC driving experience & balloon cars	Open
16:05 – 16:35	Tea	Open	Open	Open	Open
16:35 – 17:35	AMESA AGM				
18:30	Cultural Evening				

Wednesday 09 July	Main Programme	Activity Lab [Room 15]	ITSI E-Learning [Room 17]	Bloodhound SSC [Room 18]	Activities [Room 19]
08:30 – 10:30	Parallel Session 3	<i>How to use the Casio fxCG20 graphic calculator to draw graphs - Mirriam Mafojane</i>	ITSI E-learning presentations on the hour	BLOODHOUND SSC driving experience & chatterboxes	Open
10:35 – 11:00	Tea	Open	Open	Open	Open
11:00 – 12:00	Plenary: Anne Maclean				
12:05 – 13:05	Parallel Session 4 [SIG]	<i>Engaging with Nokia Mobile Mathematics – a local online FET Maths service with no subscription fees - Garth Spencer-Smith</i>	ITSI E-learning presentation	BLOODHOUND SSC driving experience & rocket cars	Open
14:00 – 16:00	Excursions	<i>So you want accurate graphs in your Mathematics Paper? Use Graph.exe software for free - Peter Raadt</i>	ITSI E-learning presentations on the hour	BLOODHOUND SSC driving experience & balloon cars	Open
Thursday, 10 July					
08:30 – 10:30	Panel Discussion 2				
10:30 – 11:00	Tea	Open	Open	Open	Open
11:00 – 12:00	Plenary: Vimolan Mudaly				
12:05 – 13:05	Parallel Session 5 (SIGs)	<i>Engaging with Nokia Mobile Mathematics – a local online FET Maths service with no subscription fees - Garth Spencer-Smith</i>	ITSI E-learning presentation	BLOODHOUND SSC driving experience & chatterboxes	Open
13:05 – 14:00	Lunch	Open	Open	Open	Open
14:00 – 16:05	Parallel Session 6	<i>Using Microsoft Excel to draw accurate ogives, histograms and frequency tables - Peter Raadt</i>	ITSI E-learning presentations on the hour	BLOODHOUND SSC driving experience & rocket cars	Open
16:05 – 16:30	Tea	Open	Open	Open	Open
16:35 – 17:35	<i>Demystifying mathematics through games</i>	Open	ITSI E-learning presentation	BLOODHOUND SSC driving experience & balloon cars	Open
19:00	Gala dinner				
Friday, 11 July					
08:30 – 09:35	Parallel Session 7	Open	ITSI E-learning presentation	BLOODHOUND SSC driving experience & chatterboxes	Open
09:35 – 10:00	Tea				
10:00 – 11:00	Plenary: Ingrid Rewitzky				
11:00 – 12:00	Closing Ceremony				
12:00 – 13:00	Lunch				

Exhibitions

Visit our exhibitions in the Spangenberg Hall and learn new ways of making your classrooms come alive.

Academic Programme

Sunday, 06 July 2014

10:00 – 21:00	Registration	Room 1, 2 & 3
14:00	Hostel accommodation opens	

Pre-congress workshops

15:00 – 18:00

Audience	Type	Presentation	Venue						
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<table border="1" style="border-collapse: collapse; width: 100px; height: 15px;"> <tr> <td style="width: 15%;"></td> <td style="width: 15%; background-color: #FFD700;"></td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> </tr> </table>							WS	<i>From adding on to breaking down and building up: The growth of computational competence - Tim Mabuza</i>	M Hall
<table border="1" style="border-collapse: collapse; width: 100px; height: 15px;"> <tr> <td style="width: 15%;"></td> <td style="width: 15%;"></td> <td style="width: 15%; background-color: #FFD700;"></td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> </tr> </table>							WS	<i>Conceptions of school algebra: The link to function - Anthea Roberts</i>	Room 36
<table border="1" style="border-collapse: collapse; width: 100px; height: 15px;"> <tr> <td style="width: 15%;"></td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> <td style="width: 15%; background-color: #90EE90;"></td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> </tr> </table>							WS	<i>GeoGebra investigations in support of key Geometry results in the curriculum - Werner Olivier & Phil Collett</i>	Room 15

Legends

Audience					Presentation types	
FP	IP	SP	FET	MTE	LP	Long paper
1	2	3	4	5	SP	Short paper
Venues					HT	How I teach
Room 1 - 5		Downstairs - main building			1WS	Workshop (1 hour)
Room 6 - 10		Upstairs (left)- main building			2WS	Workshop (2 hours)
Room 11 - 13		Upstairs (right)- main building			MM	Maths Market
Room 32, 33 & 36		Downstairs - adjacent to hall			DPS	Discussion with plenary speaker
M Hall		Main Hall			SIG	Special interest group
SP Hall		Spangenberg Hall				
Room 15 - 19		Activity Centre (upstairs)				
Room 26/27		Downstairs				





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Monday, 07 July 2014

08:00 – 09:45	Registration	Room 1 - 3
08:30 – 09:30	Tea	Quad
10:00 – 11:30 (Seated by 09:45)	Opening Ceremony	Main Hall and Room 26/27

Plenary 1

11:30 – 12:30

Generalizations in mathematics: from primary to secondary school and beyond
Rajendran Govender, Zenex guest speaker



Main Hall and Room 26/27

Lunch

13:00 – 14:00


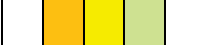






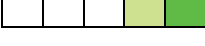






JP Auret Hostel and Dugmore House (for special dietary needs)

Parallel Session 1

14:00 – 16:05

Audience	Type	Presentation	Venue	Time
	LP	<i>Pedagogical perceptions of the roles of languages in the teaching and learning of mathematics: A case of four 9th</i> – Percy Sepeng	Room 11	14:00 – 15:00
	1WS	<i>The Counting Principle</i> – Desiree Timmet	Room 12	14:00 – 15:00
	2WS	<i>Developing geometric thinking through play</i> – Kerren Vollmer and Louise Keegan	Room 10	14:00 – 16:00
	2WS	<i>An exploration of direct proportion calculation methods</i> – Andrew Gilfillan	Room 7	14:00 – 16:00
	HT	<i>How I teach measurement: length</i> – Andrea Henderson	Room 6	14:00 – 14:30
	2WS	<i>Probability</i> - Thabisa Tikilo	Room 33	14:00 – 16:00
	LP	<i>Deepening thinking-like problems: The case of two students</i> - Bruce May	Room 4	14:00 – 15:00
	2WS	<i>Mathematical thinking with Foundation Phase teachers</i> – <u>Nicky Roberts</u> , Ursula Röntsch and Melissa Mentoor	Room 13	14:00 – 16:00
	2WS	<i>GeoGebra investigations in support of key Geometry results in the curriculum</i> – Werner Olivier and Phil Collett	Room 36	14:00 – 16:00
	MM	<i>Learning support materials that makes maths fun in Foundation Phase</i> - Heleen Johnson	Room 1	14:00 – 15:00

Monday, 07 July 2014 continued

Audience	Type	Presentation	Venue	Time
	MM	<i>Data handling and probability for Senior Phase using the SHARP EL-535 scientific calculator</i> – Nicole Sengers	Room 2	14:00 – 15:00
	LP	<i>Factors contributing to the popularity of Mathematics Olympiads and Competitions in some schools: An interrogation of learners' and teachers' views</i> – V G Govender	Room 5	14:00 – 15:00
	LP	<i>Mathematics textbook analysis: A guide to choosing the appropriate mathematics textbook</i> – Benadette Aineamani and <u>Seshni Naicker</u>	Hall	14:00 – 15:00
	2WS	So you want accurate graphs in your Mathematics Paper? Use Graph.exe software for free - Peter Raadt	Room 15	14:00 – 16:00
	1WS	<i>Rocket car-matics</i> - <u>Christopher Maxwell</u> and Dave Rowley	Room 19	14:00 – 15:00
	HT	<i>How I teach patterns in a Grade 1 class</i> – Nomathamsanqa Mahlobo and Rosemond Ntombela	Room 6	14:35 – 15:00
	1WS	<i>Developing an intuitive understanding of the derivative function using Geogebra</i> - Ingrid Mostert	Room 12	15:05 – 16:05
	1WS	<i>Demystifying Pythagoras</i> – Ian Schleckter	Room 32	15:05 – 16:05
	LP	<i>A mathematical problem solving exercise by in-service teachers in a continuous teaching development context</i> – <u>Monde Mbekwa</u> and Rajendran Govender	Room 11	15:05 – 16:05
	LP	<i>Exploring learning trajectories in algebra: Informing the teaching of functions</i> - Robyn Clark	Room 4	15:05 – 16:05
	MM	<i>E-learning - Personalised Education Framework by ITS I School Innovation</i> - Wikus Breetzke	Room 1	15:05 – 16:05
	DPS	<i>Discussion with the plenary speaker</i> - Rajendran Govender	Room 5	15:05 – 16:05
	MM	<i>X-Kit Achieve! Mobile</i> - Pearson	Room 2	15:05 – 16:05
	LP	<i>SKA: Studying the Universe with the world's Biggest Telescope</i> – Dr Tiplady	M Hall	15:05 – 16:05
	1WS	<i>Rocket car-matics</i> – Christopher Maxwell	Room 19	15:05 – 16:05

Tea

16:05 – 16:35

Quad

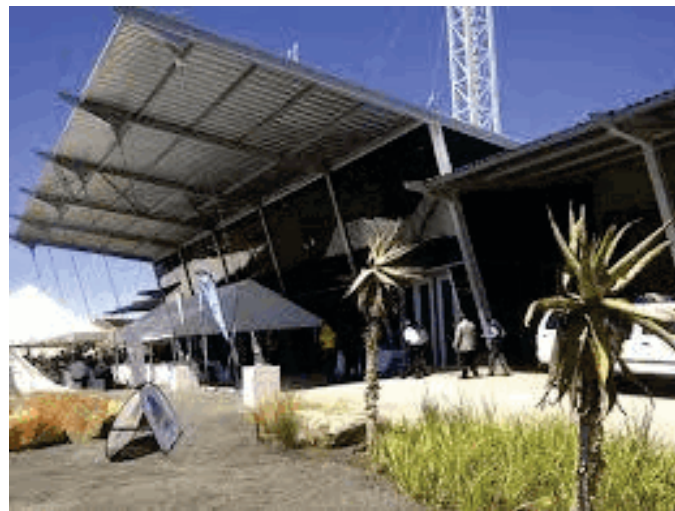
AMESA regional meetings

16:35 – 17:35

Region	Venue
Gauteng	Room 26/27
Eastern Cape	Room 32
KwaZulu-Natal	Room 36
North-West	JP Auret Hostel dining room
Mpumalanga	Room 33
Free State	JP Auret Hostel "tent"
Northern Cape	M HALL
Limpopo	Room 4
Western Cape	Room 5

Welcome Dinner

18:30



*Mittah Seperepere Convention Centre – MSCC
West Circular Road, Kimberley*

Tuesday, 08 July 2014

Panel 1

08:30 – 10:30

“Is mathematics pre-service teacher education delivering?”

Panelists: Nick Taylor, Batseba Mofolo-Mbokane and Vimolan Mudaly

Chair: Hamsa Venkat

Main Hall and Room 26/27

Tea

10:30 – 11:00

Tea sponsored by Pearson

Quad

PEARSON

Plenary 2

11:00 – 12:15

The power of mathematics at 1000 mph

Wing Commander Andy Green OBE

Main Hall and Room 26/27



Session Maths Market

12:15 – 13:00

CASIO 4 U

Lauren Izaaks

Main Hall and Room 26/27



Lunch

13:00 – 14:00




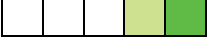


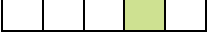







JP Auret Hostel and Dugmore House (for special dietary needs)

Parallel Session 2





14:00 – 16:05

Audience	Type	Presentation	Venue	Time
	2WS	<i>Teaching strategies for mental mathematics (Foundation Phase)</i> - Connie Skelton	Room 33	14:00 – 16:00
	2WS	<i>Activities that illuminate and visibilize functions as objects</i> - Shadrack Moalosi	Room 36	14:00 – 16:00
	2WS	<i>Changing the way we teach function transformations with GeoGebra</i> - Cerenus Pfeiffer	Room 10	14:00 – 16:00
	2WS	<i>Using an empty number line with Foundation Phase learners</i> - Tania Halls and Nicky Roberts	Room 11	14:00 – 16:00
	1WS	<i>Finding links between rates of change of the distance/ time graph and area under the speed/ time graph</i> - Marié Weitz and Bharati Parshotam	Room 6	14:00 – 15:00
	2WS	<i>Using a calculator to investigate whether a linear, quadratic or exponential function best fits a set of bivariate numerical data</i> - Jackie Scheiber	Room 12	14:00 – 16:00

Tuesday, 08 July 2014 continued

Audience	Type	Presentation	Venue	Time
	SP	<i>Teaching with a 'critical feature' of an 'object of learning' in focus</i> - Vasen Pillay, Mampotse Shirley Ramasia and Taona Nyungu	Room 1	14:00 – 14:30
	2WS	<i>A formative assessment lesson: matching graphs, stories and tables</i> - <u>Marie Joubert</u> , Barrie Barnard and Claire Blackman	Room 13	14:00 – 16:00
	MM	<i>Using the SHARP EL-535 scientific calculator to teach algebra skills for Senior Phase</i> - Tal Moore	Room 2	14:00 – 15:00
	LP	<i>Developing rubrics for TPACK tasks for prospective mathematics teachers: A methodological approach</i> - Kim Ramatlapana	Room 4	14:00 – 15:00
	1WS	<i>Rocket car-matics</i> - <u>Christopher Maxwell</u> and Dave Rowley	Room 8	14:00 – 15:00
	LP	<i>Theoretical-computational conflicts between Euclidean and dynamic geometry environments: example of Varignon Theorem</i> - Mdutshekela Ndlovu	Room 5	14:00 – 15:00
	2WS	<i>Analysis of van Hiele's theory in circle geometry: A focus in FET level</i> - Sibawu Witness Siyepu	Room 7	14:00 – 16:00
	LP	<i>Data is key</i> - Dave Rowley	M Hall	14:00 – 15:00
	2WS	<i>Using Microsoft Excel to draw accurate ogives, histograms and frequency tables</i> - Peter Raadt	Room 15	14:00 – 16:00
	HT	<i>Test and improve paper-based and online testing solution</i> - Tatiana Sango	Room 32	14:35 – 15:00
	MM	<i>Hotmaths - an interactive online mathematics platform for learners and teachers</i> - Zonia Jooste	Room 1	15:05 – 16:05
	LP	<i>A review of research on the effect of using a group learning approach in mathematics classrooms</i> - Joseph J Dhlamini	Room 5	15:05 – 16:05
	MM	<i>The power of play</i> - Sarah Ohlson de Fine	Room 2	15:05 – 15:30
	SP	<i>Engaging with cognitive levels: A practical approach towards assessing the cognitive spectrum in mathematics</i> - Ryna du Plooy and Caroline Long	Room 32	15:05 – 15:30

Tuesday, 08 July 2014 continued

Audience	Type	Presentation	Venue	Time
	1WS	<i>Rocket car-matics</i> - <u>Christopher Maxwell</u> and Dave Rowley	Room 8	15:05 – 16:05
	LP	<i>Construction routes in the solution of compass and straightedge construction problems: Geometric reasoning of first year mathematics education students</i> - Bharati Parshotam and Erna Lampen	Room 4	15:05 – 16:05
	DPS	<i>Discussion with plenary speaker</i> – Andy Green	M HALL	15:05 – 16:05
	SP	<i>Preparing to teach Grade 12 financial mathematics: A case study of student teachers' learning experiences</i> – J.P. Makonye, M. Weitz and B. Parshotam	Room 32	15:35 – 16:05

Tea

16:05 – 16:35

Quad

AMESA Annual General Meeting

16:35 – 17:35

Main Hall and Room 26/27

Cultural evening



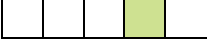




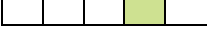






18:30 – 22:00

*Mittah Seperepere Convention Centre – MSCC
West Circular Road, Kimberley*







Wednesday, 09 July 2014

Parallel Session 3

08:30 – 10:35

Audience	Type	Presentation	Venue	Time
	2WS	<i>Developing geometric thinking through play - Kerryyn Vollmer and Louise Keegan</i>	Room 36	08:30 – 10:30
	2WS	<i>Rider strategies for solving school geometry problems - Rajen Govender</i>	Room 33	08:30 – 10:30
	2WS	<i>Using games to consolidate calculus rules and concepts - Ingrid Mostert</i>	Room 32	08:30 – 10:30
	2WS	<i>Children making resources for measurement - Ursula Röntsch</i>	Room 10	08:30 – 10:30
	1WS	<i>Space, shape and measurement: Integrating lesson concepts and experiences - Tatiana Sango</i>	Room 11	08:30 – 09:30
	2WS	<i>What Mathematics is on offer here? - <u>Jill Adler</u> and Erlina Ronda</i>	Room 12	08:30 – 10:30
	2WS	<i>Conceptions of school algebra: The link to function - Anthea Roberts</i>	Room 6	08:30 – 10:30
	MM	<i>Teaching trig ratios and graphs using maths software - Lyn Pollock</i>	Room 1	08:30 – 09:30
	2WS	<i>From adding on to breaking down and building up: The growth of computational competence - Manare Setati</i>	Room 7	08:30 – 10:30
	SIG	<i>The Challenge and the Teacher Problem-Solving Course - Alwyn Olivier</i>	Room 4	08:30 – 10:30
	SIG	<i>Publishing in peer reviewed journals - Anthony Essien</i>	Room 5	08:30 – 10:30
	2WS	<i>Making regression analysis easy using a Casio scientific calculator - Astrid Scheiber</i>	Room 8	08:30 – 10:30
	MM	<i>The primary school initiative to address the problem-solving challenge - Jeffrey Thomas</i>	Room 2	08:30 – 09:30
	LP	<i>Pedagogic actions and strategies that support sophistication within Foundation Phase number work - Marié Weitz</i>	M Hall	08:30 – 09:30

Wednesday, 09 July 2014 continued

Audience	Type	Presentation	Venue	Time
	2WS	<i>How to use the Casio fxCG20 graphic calculator to draw graphs - Mirriam Mafojane</i>	Room 15	08:30 – 10:30
	HT	<i>Keep calm - Do maths on an iPad - Laetitia de Jager</i>	Room 11	09:35 – 10:00
	LP	<i>Learners' explanations of the errors they make in introductory algebra - Sbongile Mashazi</i>	Room 1	09:35 – 10:35
	MM	<i>The right textbook makes a big difference: Shape and Space topics in the Via Afrika series - Andrew Gilfillan</i>	Room 2	09:35 – 10:35
	LP	<i>More Bloodhound SSC mathematics - Andy Green</i>	M Hall	09:35 – 10:35
	HT	<i>How I teach Congruency - Adrian Lotter</i>	Room 11	10:05 – 10:35

Tea

10:35 – 11:00

Quad

Plenary 3

11:00 – 12:00






Demystifying mathematics: let's keep our world alive!

Anne Maclean















Main Hall and Room 26/27

Parallel Session 4

12:05 – 13:05

Audience	Type	Presentation	Venue	Time
	LP	<i>Purposefully integrating senior phase mathematics content with constructivist pedagogy in Suncap teacher professional development - Ramesh Jeram and Cosmas Tambara</i>	Room 36	12:05 – 13:05
	1WSO 01	<i>Reinforcing the understanding of place value through number bases - Lerato Mathenjwa</i>	Room 33	12:05 – 13:05
	SP	<i>The role of teachers in developing learners' mathematics discourse - Benadette Aineamani</i>	Room 6	12:05 – 12:30
	LP	<i>Exploring the mathematical proficiency of grade 6 teachers: A case of Gauteng Tshwane East - Zingiswa M. Jojo, Joseph J. Dhlamini, M.M. Phoshoko and M.G. Ngoepe</i>	Room 1	12:05 – 13:05
	HT	<i>How I teach word problems in Grade 9 class - Wandile Hlaleleni</i>	Room 7	12:05 – 12:30

Wednesday, 09 July 2014 continued

Audience	Type	Presentation	Venue	Time
	MM	<i>Financial maths and everyday calculations for Mathematical Literacy using the SHARP EL-535 scientific calculator</i> - Nicole Sengers	Room 13	12:05 – 13:05
	HT	<i>An exploration of circle geometry based on animated Nicolet films at Wynberg Secondary School</i> - Yusuf Johnson	Room 8	12:05 – 12:30
	LP	<i>Exploring the use of activity theory as a framework for teaching and learning of mathematics</i> - Jayaluxmi Naidoo	Room 2	12:05 – 13:05
	HT	<i>Format on an analogue clock-grade 5</i> - Harlend Felix and Chrichana Felix	Room 10	12:05 – 12:30
	LP	<i>Diagrams: Are they useful in mathematics?</i> - Vimolan Mudaly	Room 4	12:05 – 13:05
	SP	<i>How we teach time in Grade 3</i> - <u>Helene Schoeman</u> ; Tania Halls and Nicky Roberts	Room 11	12:05 – 12:30
	MM	<i>Mathematics Enhanced ePub</i> - Pearson	Room 5	12:05 – 13:05
	LP	<i>Teachers' content knowledge: How do the evidence and proposals weigh up?</i> - Cyril Julie	Room M Hall	12:05 – 13:05
	1WS	<i>Engaging with Nokia Mobile Mathematics – a local online FET Maths service with no subscription fees</i> - Garth Spencer-Smith	Room 15	12:05 – 13:05
	SP	<i>Connecting mathematics with its history</i> - Avhasei Richard Tsanwani	Room 10	12:35 – 13:05
	HT	<i>How I teach tally tables in the context of the cycle of data handling</i> - Leonora Joy Davids	Room 6	12:35 – 13:05
	HT	<i>The power of the seduction of numbers</i> - Rolene Liebenberg	Room 7	12:35 – 13:05
	HT	<i>How I teach number patterns</i> - Lloyd Stuurman	Room 11	12:35 – 13:05
	HT	<i>How I teach solving 3-dimensional problems in trigonometry</i> - A Boachie-Yiadom	Room 8	12:35 – 13:05

Wednesday afternoon excursions (and packed lunch)

13:15

Your packed lunch will be served from outside **Room 22**.
Enjoy your afternoon in Kimberley and the opportunity to strengthen collegiality...

Thursday, 10 July 2014

Panel 2

08:30 – 10:30

"Is the new CAPS curriculum delivering?"

Panelists: Werner Olivier, Giel du Toit, Rajen Govender

Chair: Vasuthavan Govender

Main Hall and Room 26/27

Tea

10:30 – 11:00

Quad

Plenary 4

11:00 – 12:00

So, what do our teachers know?

Vimolan Mudaly

University of KwaZulu-Natal

Main Hall and Room 26/27

Parallel Session 5: Special interest groups

12:05 – 13:05

Audience	Presentation	Chair	Venue
	Curriculum Phase Committee FP	Busisiwe Goba	Room 1
	Curriculum Phase Committee IP	Khangalani Mdakane	Room 2
	Curriculum Phase Committee SP	Mzwakhe Sokutu	M Hall
	Curriculum Phase Committee FET	Stephen Muthige	Room 5
	Curriculum Phase Committee Mathematical Literacy	Vasuthavan Govender	Room 6
	Mathematics Teacher Education	Caroline Long	Room 4

Parallel Session 5

12:05 – 13:05

Audience	Type	Presentation	Venue	Time
	1WS	<i>Demystifying maths the Hey Math way (IP)</i> – Brenda Mmethi	Room 32	12:05 – 13:05
	1WS	<i>Demystifying maths the Hey Math way (SP)</i> - Frank Tlaletsi	Room 33	12:05 – 12:35
	1WS	<i>Demystifying maths the Hey Math way (FET)</i> - John Tities	Room 36	12:05 – 13:05
	HT	<i>Demystifying Pythagoras</i> – Ian Schleckter	Room 10	12:05 – 12:35
	1WS	<i>Engaging with Nokia Mobile Mathematics – a local online FET Maths service with no subscription fees</i> - Garth Spencer-Smith	Room 15	12:05 – 13:05


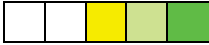












Lunch

13:00 – 14:00








JP Auret Hostel and Dugmore House (for special dietary needs)

Parallel Session 6

14:00 – 16:05

Audience	Type	Presentation	Venue	Time
	2WS	<i>Teaching strategies for mental mathematics (Intermediate Phase) - Connie Skelton</i>	Room 36	14:00 – 16:00
	2WS	<i>Preparedness of learners for university mathematics - Ingrid Rewizky</i>	Room 33	14:00 – 16:00
	SP	<i>Error discourse analysis in solving quadratic equations by completing a square - Sello Makgakga</i>	Room 5	14:00 – 14:30
	2WS	<i>Models and explanations for early addition and subtraction - Quinton Nam</i>	Room 12	14:00 – 16:00
	MM	<i>Hotmaths - an interactive online mathematics platform for learners and teachers - Zonia Jooste</i>	Room 1	14:00 – 15:00
	2WS	<i>Mental maths without worksheets or mini-tests: Activities to get your class into maths gear - Sue Fourie</i>	Room 10	14:00 – 16:00
	2WS	<i>Working with learners to find the equation of a straight line from the graph - Julia Mabiletsa, Molatelo Racheke and Craig Pournara</i>	Room 11	14:00 – 16:00
	LP	<i>A comparison of the achievement goal orientation of mathematics learners WITH/WITHOUT attention deficit hyperactivity disorder (ADHD) - Erica D. Spangenberg</i>	Room M Hall	14:00 – 15:00
	2WS	<i>Probability - Oetsi Mokhobo</i>	Room 8	14:00 – 16:00
	2WS	<i>Using a scientific calculator for functions in the FET band - Rencia Lourens</i>	Room 7	14:00 – 16:00
	2WS	<i>Graphical tools towards understanding contexts - Andrew Gilfillan</i>	Room 6	14:00 – 16:00
	LP	<i>Using the South African Mathematics Challenge to develop pre-service mathematics teachers' problem-solving abilities – V.G. Govender</i>	Room 4	14:00 – 15:00
	2WS	<i>Using Microsoft Excel to draw accurate ogives, histograms and frequency tables - Peter Raadt</i>	Room 15	14:00 – 16:00
	SP	<i>Effective interest rates and bank adverts: making sense or making cents - Craig Pournara</i>	Room 5	14:35 – 15:00

Thursday, 10 July 2014 continued

Audience	Type	Presentation	Venue	Time
	SP	<i>Teacher Agency and Professional Practice: Developing and nurturing creativity in mathematics teacher education</i> - Caroline Long and Erna Lampen	Room 2	14:00 – 14:30
	MM	<i>Data handling and probability for FET using the SHARP EL-535 scientific calculator</i> - Tal Moore	Room 1	15:05 – 16:05
	DPS	<i>Discussion with plenary speaker</i> – Vimolan Mudaly	Room M Hall	15:05 – 16:05
	1WS	<i>Organising and summarising data</i> - Mukhaninga Tshililo	Room 13	15:05 – 16:05
	SP	<i>Managing and leading mathematics improvement in Foundation Phase</i> - Shauna Pamplin and Nicky Roberts	Room 2	15:05 – 15:35
	LP	<i>Conversions in the metric system: reflecting on the GET mathematics curriculum</i> - Stanley A. Adendorff	Room 4	15:05 – 16:05
	HT	<i>How I teach fractions in the intermediate phase when the language of learning and teaching (LOLT) is English and the learners' home language is not English</i> - <u>Nombeko Mafenuka</u> and Janine Wilson	Room 2	15:35 – 16:05

Tea

16:05 – 16:30

Quad

Demystifying maths through games

16:30 – 17:30

Game	Venue
Chess	Room 32
Chess	Room 33
Chess	Room 36
MATHS 24	Room 1
MATHS 24	Room 2
MATHS 24	Room 4
MATHS 24	Room 5
MATHS 24	Room 6
Morabaraba	Room 7
Morabaraba	Room 8
Morabaraba	Room 10
Morabaraba	Room 11
Morabaraba	Room 12
Drumming session	M Hall



Gala dinner




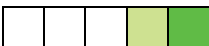




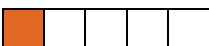

19:00 – 23:00

Mittah Seperepere Convention Centre – MSCC, West Circular Road, Kimberley

Friday, 11 July 2014

Parallel Session 7

08:30 – 09:30

Audience	Type	Presentation	Venue	Time
	1WS	<i>Demystifying maths the HEY Math way (IP) – Brenda Mmethi</i>	Room 32	08:30 – 09:30
	1WS	<i>Demystifying maths the HEY Math way (SP) - Frank Tlaetsi</i>	Room 33	08:30 – 09:30
	LP	<i>Grade 10 students' facility with rational algebraic fractions in high-stakes examination: observations and interpretations - Duncan Mhakure, Mark Jacobs and Cyril Julie</i>	Room 1	08:30 – 09:30
	LP	<i>Demystifying maths the HEY Math way (FET) - John Tities</i>	Room 36	08:30 – 09:30
	LP	<i>Exploring teachers' notion of logical thinking - Roland Fray</i>	Room 2	08:30 – 09:30
	LP	<i>Geometrical concepts in real-life context: A case study in South African Traffic Road Signs - Sibawu Witness Siyepu and Thembinkosi Mtonjeni</i>	Room 4	08:30 – 09:30
	1WS	<i>Realising the benefits of adaptive practice for mastery and the incredible potential for data-driven decision making enabled by the data - Neels van der Westhuizen</i>	Room 11	08:30 – 09:30
	SIG	<i>The Challenge and the Teacher Problem-Solving Course - Alwyn Olivier</i>	Room 5	08:30 – 09:30
	LP	<i>Mathematical question types - Charles R. Smith and Cyril Julie</i>	Room 6	08:30 – 09:30
	1WS	<i>Development of a secure number sense - Mosadi Kruger</i>	Room 12	08:30 – 09:30
	DPS	<i>Discussion with plenary speaker – Anne Maclean</i>	M Hall	08:30 – 09:30

Tea

09:35 – 10:00

Quad

Plenary 5

10:00 – 11:00

Mathematical structures and tight connections between them

Ingrid Rewitzky

Main Hall and Room 26/27

Closing ceremony

11:00 – 12:00

Main Hall and Room 26/27

Lunch

12:00 – 13:00

JP Auret Hostel and Dugmore House (for special dietary needs)

The VIA AFRIKA series for Mathematics and Mathematical Literacy written according to the CAPS curriculum



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Programme Overview

Use this overview of the programme to fill in your choices ...

Monday 7 July	Tuesday 8 July	Wednesday 9 July	Thursday 10 July	Friday 11 July
08:00 – 09:45 Registration	08:30 – 10:30 Panel 1 Chair: Hamsa Venkat Main Hall	08:30 – 10:35 Parallel session 3	08:30 – 10:30 Panel 2 Chair: VG Govender Main Hall	08:30 – 09:35 Parallel session 7
08:30 – 09:30 Tea	10:30 – 11:00 Tea	10:35 – 11:00 Tea	10:30 – 11:00 Tea	09:35 – 10:00 Tea
10:00 – 11:30 Opening ceremony	11:00 – 12:15 Plenary 2 Andy Green Main Hall	11:00 – 12:00 Plenary 3 Anne Maclean Main Hall	11:00 – 12:00 Plenary 4 Vimolan Mudaly Main Hall	10:00 – 11:00 Plenary 5 Ingrid Rewitzky Main Hall
11:30 – 12:30 Plenary 1 Rajendran Govender Main Hall	12:15 – 13:00 Maths Market Lauren Izaaks Main Hall	12:05 – 13:05 Parallel session 4	12:05 – 13:05 Parallel session 5 Special Interest Groups	11:00 – 12:00 Closing Ceremony Main Hall
13:00 – 14:00 Lunch	13:00 – 14:00 Lunch	13:15 Packed lunch	13:00 – 14:00 Lunch	12:00 – 13:00 Lunch
14:00 – 16:05 Parallel session 1	14:00 – 16:05 Parallel session 2	13:15 Excursions	14:00 – 16:05 Parallel session 6	Departure
16:05 – 16:35 Tea	16:05 – 16:35 Tea		16:05 – 16:30 Tea	
16:35 – 17:35 AMESA Regional meetings	16:35 – 17:35 AMESA AGM Main Hall		16:30 – 17:30 Demystifying maths through games	
18:30 Welcome Dinner	18:30 Cultural Evening		19:00 Gala Dinner	

Inside Back Cover

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A close-up photograph of a young Black boy in a blue school uniform looking at a piece of paper. A male teacher with a beard and a yellow shirt is smiling and looking at the boy. Other students in blue uniforms are visible in the background, slightly out of focus.

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