



# AMA CENTRE BUTTERWORTH

## MENTAL ARITHMETIC ABACUS

# INTRODUCTION TO THE INSTITUTION

The Butterworth AMA Centre is an educational institution that aims to teach the mental technique of abacus arithmetic known as a traditional but more efficient computational technique. Our Butterworth AMA Centre is located at the Jalan Raja Uda Business Centre next to the Raja Uda Food Court (RU). Our centre was established in 2006 and was registered as the Abacus Arithmetic Mental Centre by the centre's principal - Mr Low Kok Leong. Our central computation techniques were brought back by our central principals from various countries by participating in meetings and exchange meetings of studies on the mental arithmetic of this abacus such as China, Japan and Taiwan.

Our centre also has close ties with the Malaysian Mental Arithmetic Association (2015) and abroad. Our centre principal is also the chairman of the Mental Arithmetic Association (2015) and he also regularly holds experience exchange meetings and often conducts research to improve the quality and techniques of teaching on abacus mental arithmetic calculation techniques with association members and also associations abroad. Our centre principals are also often invited by abacus mental arithmetic schools in our country and abroad to provide education and advice on calculation and teaching techniques to them. Our centre also collaborates with other centres in Malaysia as contributors of training book materials displayed by our centre.

In addition, the teachers at our centre were also invited by several primary schools as coaches of their abacus mental arithmetic association. The AMA Butterworth Centre is also one of the organizers of the largest abacus arithmetic competition and mental examination in Malaysia.

# INTRODUCTION TO TEACHING

## Mental Arithmetic Abacus

According to our study, this calculation technique has existed for more than 180 years before, and it is still used to this generation in some developed countries on our earth. For example, China and Japan. To learn this advanced mental arithmetic Abacus technique, we need an abacus/suanpan as an aid. The best age to learn about this calculation technique is at the age of 4 years to the age of 12 and practice at the age of 13 to the age of 18. By learning this calculation technique, students can increase efficiency and speed in their calculation process.

In addition, this calculation technique will also bring many benefits such as increasing students' sensitivity to numbers, increasing the level of cooperation between the left and right brain, improving mental fitness, increasing their focus in problem solving, and so on.

This calculation technique has been studied to be able to complete the calculation of numbers against addition, subtraction, multiplication and division more quickly to get the correct answer compared to modern calculators on the market after adequate training. Someone who has mastered this abacus arithmetic mental calculation technique is also known as a moving calculator.

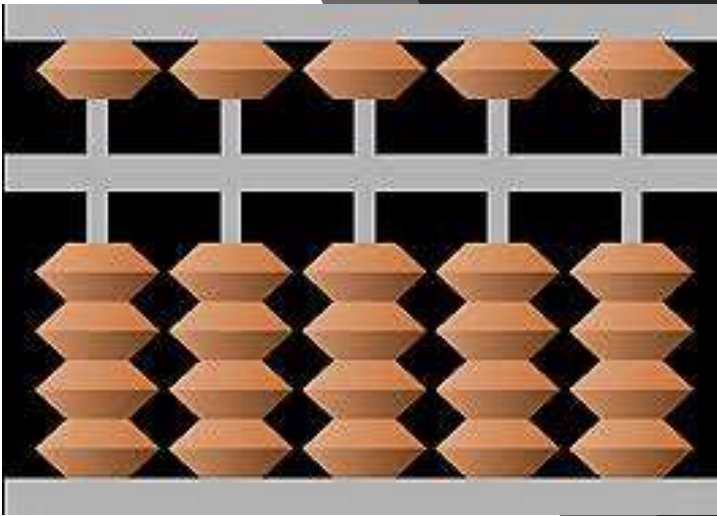
# INTRODUCTION TO TEACHING Mental Arithmetic Abacus

## 1. Abacus/suanpan

This tool is a traditional calculator used to assist our students in the calculation process at the beginner level.

This abacus consists of 2 parts, the top and the bottom. At the bottom, it consists of 4 beads while at the top, it consists of 1 bead. Each bead at the bottom represents 1 while each bead at the top represents 5.

Therefore, we know that if we add the beads at the top and all the beads at the bottom, we will get the answer 9 on each row.



# INTRODUCTION TO TEACHING Mental Arithmetic Abacus

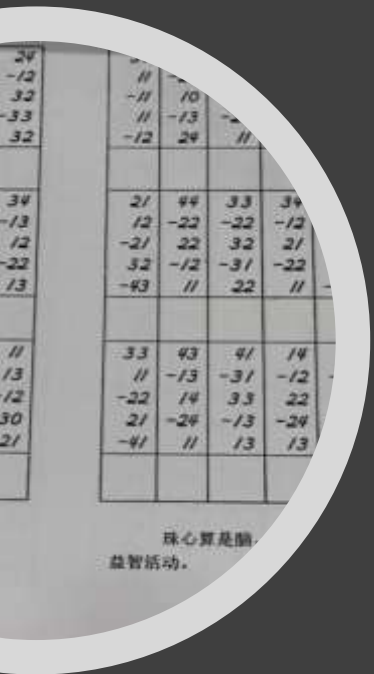


## 2. Abacus arithmetic mental book material

All abacus arithmetic mental book materials used in our teaching centre are the work of our centre principals. The material of this exercise book was created following the level of mental learning of abacus arithmetic systematically and recognized by the Malaysian Mental Arithmetic Association (2015). Our abacus book material consists of 4 levels while our arithmetic mental book material consists of 9 levels.

Apart from the book material that follows the level, we also have 4 beginner levels that provide beginner training to students who are just starting to learn and a special book material for students of previous Education level to help them to know the numbers.

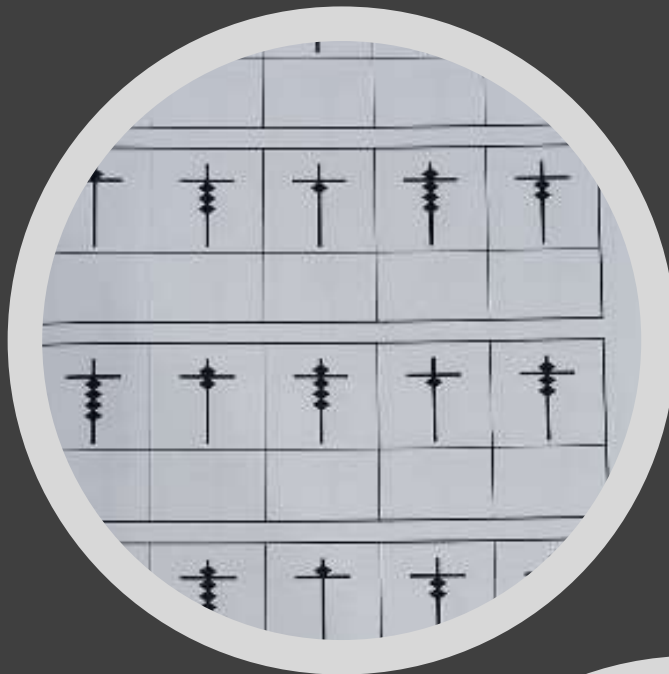
CLASSES	COURSES	SUMMARY
1. PRESCHOOL EDUCATION	A1	Teach students to use an abacus and write numbers.
2. BASIC	BASIC A	Teach students to use the +5 and -5 formulas and use the abacus.
	BASIC B	Teach students to use the +10 and -10 formulas in the use of the abacus.
3. ELEMENTARY LEVEL	ELEMENTARY	Identify students can complete the calculation process of adding and subtracting with 1 digit 3, 5, and 7 lines and 2 digits 3 lines in the allotted time.
4. INTERMEDIATE LEVEL	ADDITION, SUBTRACTION	Identify students can complete the process of counting 2 digits 3, 5 and 8 lines as well as the calculation of a mixture of digits with various lines in the allotted time.
	MULTIPLICATION, DIVISION	Teach students division and multiplier techniques using an abacus on 1 digit
5. HIGHER LEVEL	HIGHER A	Train students to enter level 8 abacus and level 5 mental arithmetic
	HIGHER B	Train students to enter level 7 abacus and level 4 mental arithmetic
	HIGHER C	Train students to enter level 6 abacus and level 3 mental arithmetic
	ADVACNCE A	Train students to enter level 4 abacus and level 2 mental arithmetic
	ADVANCE B	Train students to enter level 3 abacus and level 1 mental arithmetic
	MENTAL GRAND LEVEL	The highest training for abacus arithmetic mental techniques.



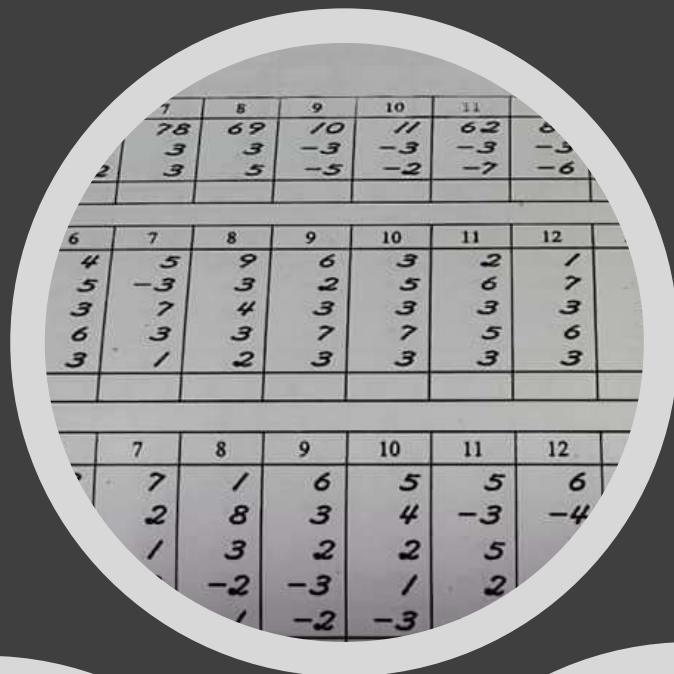
TAHAP BASIC: BASIS A



PENDIDIKAN TERDAHULU: A1

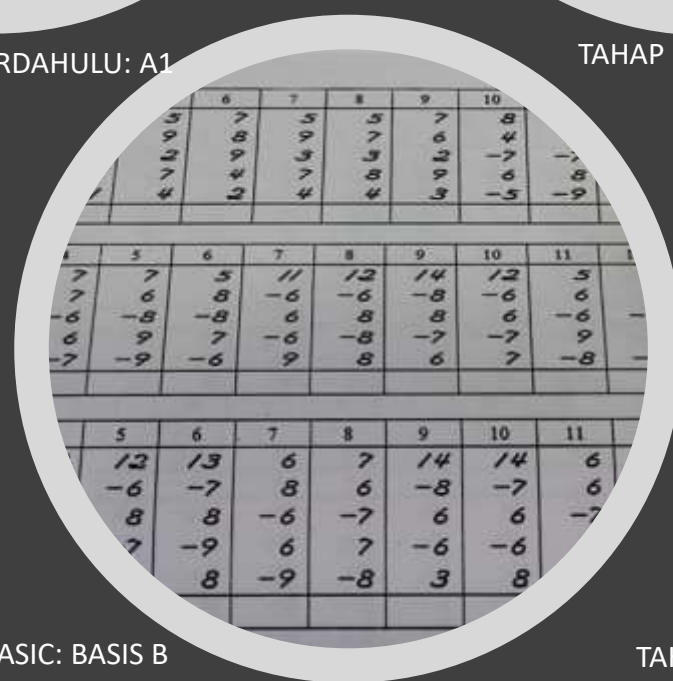


PENDIDIKAN TERDAHULU: A1

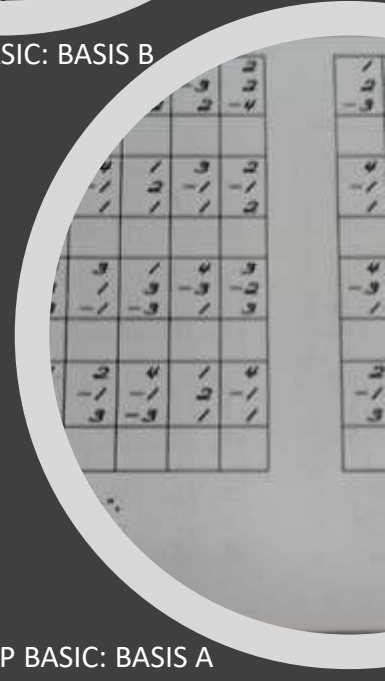


TAHAP BASIC: BASIS B

# SAMPLE QUESTIONS



TAHAP BASIC: BASIS B



TAHAP BASIC: BASIS A



1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

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31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
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81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

TAHAP SEDERHANA:  
PENAMBAHAN/  
PENGURANGAN

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
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91	92	93	94	95	96	97	98	99	100

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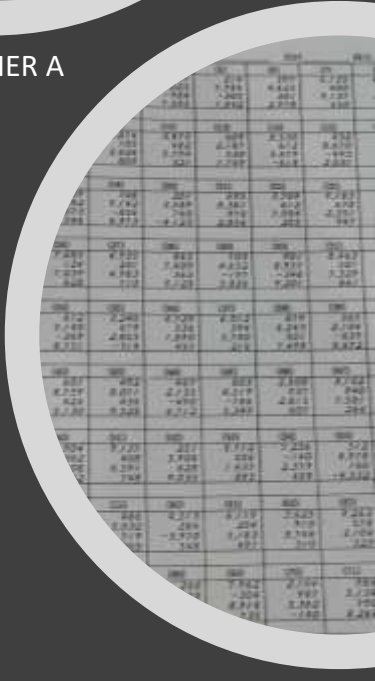
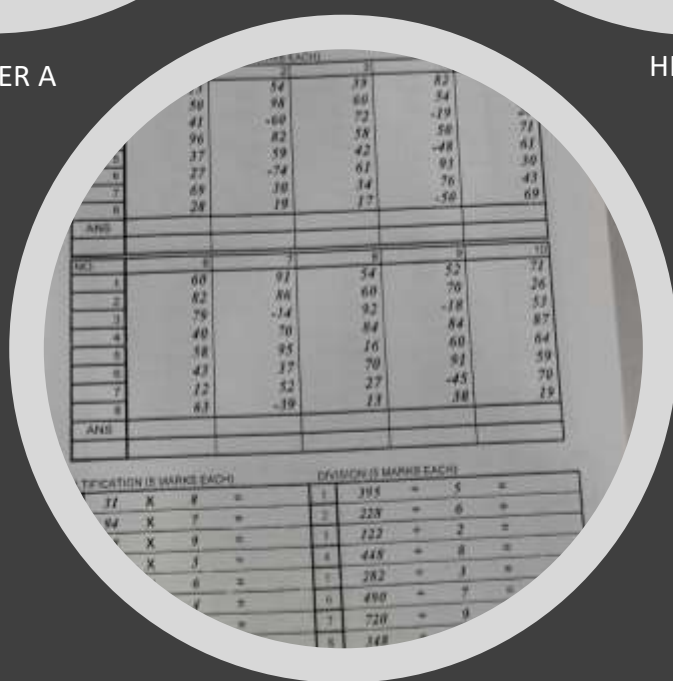
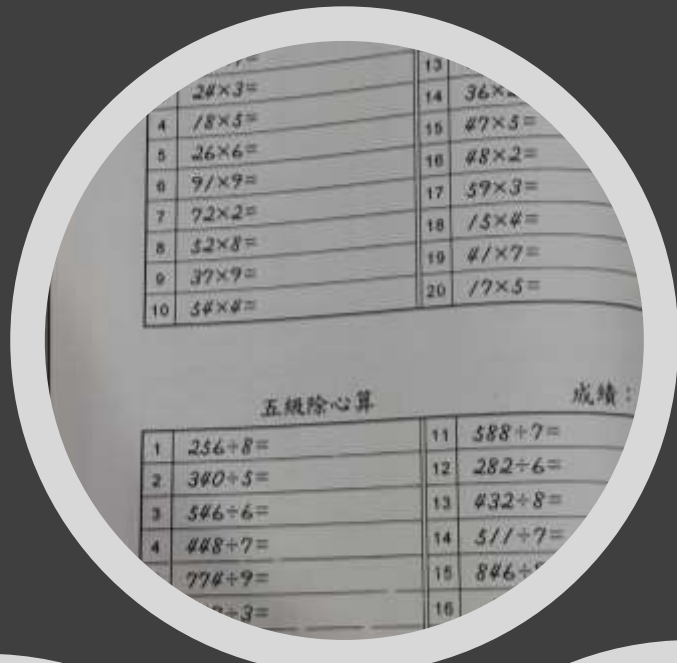
TAHAP RENDAH  
ELEMENTARY

PENGANDA/  
PEMBAHAGI

# SAMPLE QUESTIONS

TAHAP SEDERHANA:  
PENAMBAHAN/PENGURANGAN





# SAMPLE QUESTIONS

## HIGHER LEVEL

HIGHER C

HIGHER C

HIGHER A

HIGHER A

HIGHER B

HIGHER B

Sample question from ADVANCE B level showing a table with numerical data.

Sample question from ADVANCE A level showing a table with numerical data.

Sample question from MENTAL GRAND LEVEL showing a table with numerical data.

Sample question from ADVANCE A level showing a table with numerical data.

ADVANCE B

ADVANCE A

MENTAL GRAND  
LEVEL

ADVANCE A

# SAMPLE QUESTIONS

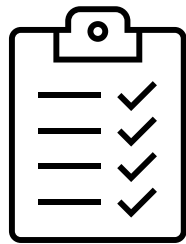
Sample question from ADVANCE B level showing a list of multiplication problems.

Sample question from MENTAL GRAND LEVEL showing a list of division problems.

ADVANCE B

MENTAL GRAND  
LEVEL

# TEACHING LEVEL EXAMINATION



Our centre will also hold an arithmetic mental abacus level assessment exam with 3 official times per year. To conduct a more systematic assessment, the level assessments available for both arithmetic and mental arithmetic abacus are as follows:

Assessment marks must be more than 80/100 before being passed on the assessment examination of each level. Apart from the formal level assessments held at 3 times per year, our central educators will also give small assessments to the students before our students start the exercise book at a new level to ensure they can complete the questions learned before.

Tahap	Abakus Arithmetik (Zhusuan)	Mental Arithmetik (Xinsuan)
15	✓	✓
14	✓	✓
13	✓	✓
12	✓	✓
11	✓	✓
10	✓	✓
9	✓	✓
8	✓	✓
7	✓	✓
6	✓	✓
5	✓	✓
4	✓	✓
3	✓	✓
2	✓	✓
1	✓	✓
	✓	✓
Grand Level	✓	✓



# INTRODUCTION TO CENTRE ACHIEVEMENT

The following are the achievements of the AMA Centre at the national and international levels as well as the approval of the abacus mental arithmetic association bodies of various countries such as China to recognize our centre's teaching techniques are correct and excellent.

In addition, we also received certificates for contributions from abacus arithmetic mental associations from various countries for our teaching and research contributions in this field.

# TEACHER GROUP INTRODUCTION

We have 14 teachers who specialize in teaching mental abacus arithmetic at our centre.

Most of the students in our class have excelled at the international level. The principal of the centre will also provide special courses to our teachers indefinitely to ensure that the techniques taught by our teachers are correct and professional.

Our teachers will also receive courses in various countries such as China to improve their self -skills in teaching in the classroom. Most of the teachers in this centre have been teaching for a long period of time and have good and systematic teaching techniques.





## CLASSROOM INTRODUCTION

Our classroom is an air-conditioned room that suits our centre students to study.



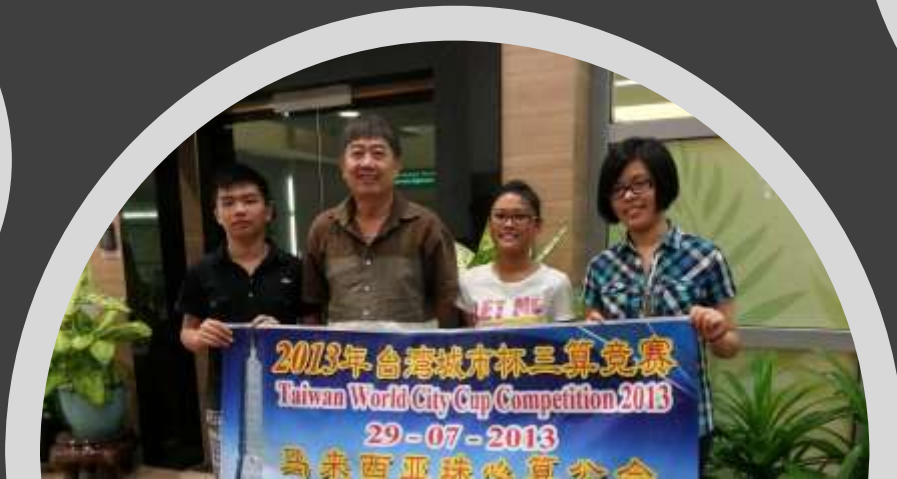
There is also a state-of-the-art training room where there is a computer installation to allow students to practice with our training system.





# INTRODUCTION TO OUR COMPETITION

- Malaysia World City Cup 2011
- Taiwan World City Cup 2013
- Global Cup Champions 2015
- Vietnam Supermind Speed Math Competition 2015



# INTRODUCTION TO OUR COMPETITION

- Global Cup Champions 2015
- Vietnam Supermind Speed Math Competition 2015







# PMAM National Grading & Competition 2015

# Pertandingan Mental Aritmetik & IQ Piala LCT Zon Utara Kali Ke-6 (2015)





# Malaysia Abacus Mental Arithmetic Open Competition (2015)



# World City Cup (2016)



of Education (Malaysia)

全能竞赛  
16 World City Cup  
Science & Mathematics Competition  
SENATOR CH...  
n Depul...  
Malaysia



# Youth International Mathematic Competition (2016)

中国深圳育大文化教育赴美  
Yuda Education center of Shenzhen City, China, to the





# Northern Region Mathematics, Abacus Calculation, Mental Calculation, Olympic Mathematics Competition (2016)



# Pertandingan Mental Aritmetik & IQ Piala LCT Zon Utara Kali ke-7 (2016)





# International Abacus & Mental Arithmetic Meet (2016)



# AMA Competition & Proficiency Exam (2017)





# World City Cup Competition (2017)





# Pertandingan Zon Utara (2017)





# Vietnam Supermind Speed Math Competition (2017)





# Pertandingan Abakus Peringkat Antarabangsa (2017)



# AMA Competition and Grading Test (2018)







PMAM (2015)  
Abacus & Mental  
Arithmetic



National  
Competition  
Langkawi (2018)



# Pertandingan Malaysia Abacus Mental Arithmetic Dan Mathematics (2018)

## World City Cup (2018)





# Peperiksaan Dan Pertandingan PMAM Abacus Mental Arithmetic (2018)





Pertandingan Zon Utara  
Malaysia (2018)



Pertandingan Abacus  
Mental Arithmetics  
Butterworth (2018)





# Pertandingan Kebangsaan AMA Dan Mathematics (2019)

## Pertandingan Dan Peperiksaan AMA SJK (C) Kuan Hwa



# World City Cup Competition (2019)





# Peperiksaan Dan Pertandingan PMAM Abacus Mental Arithmetic (2019)





# Pertandingan Kebangsaan Dan Antarabangsa AMA (2019)





# AMA Competition & Grading Test (2020)



# Pertandingan AMA Malaysia Online And Offline (2020)





# Global Cup Competition 2021



For more information,  
please contact us or  
visit our web site

<https://www.abacuscalculation.com>

ABACUS  
Calculation

