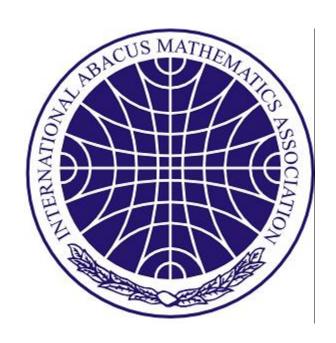
The HongKong International Mathematics and Mental Arithmetic Competition 2024



Organizing Unit: IAMA HongKong Branch

Assistance Unit: Fung Kai No.1 Secondary School

IAMA Head Quarter, IAMA Every Branch

Abacus Society of ROC(Taiwan)

Olympics Publisher

Competition Date: Sunday, 4th August 2024

Competition Venue : Fung Kai No.1 Secondary School (Hong Kong)

The HongKong International Mathematics and Mental Arithmetic Competition 2024

Competition Scheme

1. Objective

- (1) To encourage all children in the world to active in practicing mathematics and mental arithmetic.
- (2) To encourage children for developing their creative ability.
- (3) For cultural exchange in each member country.
- (4) To forming good relationship between all children from each country.
- (5) To promote all member country obtain happiness and healthy.
- 2. Organizing Unit: IAMA HongKong Branch
- 3. Assistance Unit: IAMA Head Quarter, IAMA Every Branch
 Abacus Society of ROC(Taiwan)
 Olympics Publisher
- 4. Registration Date: From now until 30 June 2024

 (Exceeds the time limit even slightly does not accept.)
- 5. Registration Venue: IAMA Head quarter, every Branch and each Test Area
- 6. Competition Date: Sunday, 4th August 2024
- 7. Competition Venue: Fung Kai No.1 Secondary School (Auditorium)

 No.17 Jockey Club Road, Sheung Shui, NT, Hong Kong

 www.fk1ss.edu.hk

8. Participative Qualifications

Each public or private preschools (Kindergarten), primary schools, secondary schools, and high schools students. (Include supplementary school and nursery) (High school students only can participate Mental Arithmetic Competition)

9. Competition Category and Age

(1) Mathematics Competition

A. Individual

a. Kindergarten: K2 and K3b. Primary School: Grade 1 to 6c. Secondary School: Grade 7 to 9

B. Group: The participating unit from each Grade selected 3 students to be a team.

If the participants in the individual of the grade is less than 10 peoples (inclusive). The group competition of the grade will be cancelled.

(Group competition score is computing by Individual competition score, so do not need join extra competition.)

(2) Mental Arithmetic Competition

A. Individual

a. Kindergarten: K2 and K3b. Primary School: Grade 1 to 6

c. High and Secondary School: All Grades are together to competition.

B. Group: The participating unit from each Grade selected 3 students to be a team.

All grades competition age tables

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Grade	Competi	tion Age
Glade	Bigin	End
Kindergarten 2 (K2)	2018/6	~
Kindergarten 3 (K3)	2017/6	2018/12
Primary 1 (P1) - Grade 1	2016/6	2017/12
Primary 2 (P2) - Grade 2	2015/6	2016/12
Primary 3 (P3) - Grade 3	2014/6	2015/12
Primary 4 (P4) - Grade 4	2013/6	2014/12
Primary 5 (P5) - Grade 5	2012/6	2013/12
Primary 6 (P6) - Grade 6	2011/6	2012/12
Secondry 1 (G7) - Grade 7	2010/6	2011/12
Secondry 2 (G8) - Grade 8	2009/6	2010/12
Secondry 3 (G9) - Grade 9	2008/6	2009/12
High School (Mental only)	2002/6	2008/12

- Note: 1. Considering the slightly different age of enrollment in different countries. The benchmark is based on the three-month increase and decrease in the entry age for all grades in Taiwan. For example, the current school entrance age for Taiwan Primary 1 students is $2016/9/2 \sim 2017/9/1$. Plus or minus three months is $2016/6 \sim 2017/12$.
 - 2. All grades allow participants to leapfrog level (upgrade) competition. But do not downgrade.

10. Competition items, Scope and Scoring Criteria, and Ranking Rules

(1) Mathematics Competition

A. First item (Set 1)

			Number of	Each	Total	Time
Grade	Topic Type	Question Type	Questions	Question	Score	Allowed
			(Questions)	(Marks)	(marks)	(minutes)
Kindergarten and Primary	Lacii giau c		60	10	600	Total
School	(3 papers, B4)	Multiple Choice	00	10	000	20
Secondary	Each grade	Multiple Choice	30	10	300	
School	(6 papers, A4)		30	10	300	minutes

B. Second item (Set 2) (same score supplementary competition)

			Number of	Each	Total	Time
Grade	Topic Type	Question Type	Questions	Question	Score	Allowed
			(Questions)	(Marks)	(marks)	(minutes)
Kindergarten and Primary	Each grade		20	10	200	
School	(1 papers, B4)	Multiple Choice	20	10	200	Total
Secondary	Each grade	widitiple Choice	10	10	100	5 minutes
School	(2 papers, A4)		10	10	100	

(2) Mental Arithmetic Competition

Grade	Kindergarten 2	Kindergarten 3	Primary 1	Primary 2	Primary 3 and 4	Primary 5 and 6	High and Secondary
Item	(K2)	(K3)	(P1)	(P2)	(P3、P4)	(P5、P6)	School(G7 ~ G9, High)
First item (Set 1) 3 minutes	Class 12, 11, 10 ± Each 20 questions Total 60 questions Total Score 120 marks	Class 10, 9, 8 ± Each 20 questions Total 60 questions Total Score 120 marks	Class 9, 8, 7 ± Each 20 questions Total 60 questions Total Score 120 marks	Class 8, 7, 6 ± Each 20 questions Total 60 questions Total Score 120 marks	Class 4 (multiply)(2×1) 40 Class 4 (divide) (2,3÷1) 40 Class 4 ± 20 questions Total 100 questions Total Score 120 marks	Class 3 (multiply)(3×1) 40 Class 3 (divide) (3,4÷1) 40 Class 3 ± 20 questions Total 100 questions Total Score 120 marks	Class 2 (multiply)(2×2) 40 Class 2 (divide) (3,4+2) 40 Class 2 ± 20 questions Total 100 questions Total Score 120 marks
Second item (Set 2) 1 minutes	10 Class ± Total 40 questions Total Score 80 marks	8 Class ± Total 40 questions Total Score 80 marks	7 Class ± Total 40 questions Total Score 80 marks	6 Class ± Total 40 questions Total Score 80 marks	5 Class ± Total 40 questions Total Score 80 marks	4 Class ± Total 40 questions Total Score 80 marks	3 Class ± Total 40 questions Total Score 80 marks

IAMA Mental Arithmetic Standard

Level	Addition and subtraction (±)	Multiply (×)	Divide (÷)
Class 2	2 or 3 digit 10 units(Decimal)	2 × 2	3、4 ÷ 2
Class 3	2 digit 10 units	3 × 1	3、4÷1
Class 4	2 digit 8 units	2 × 1	2、3÷1
Class 5	2 digit 6 units、2 digit 4 units and 1 digit 4 units		
Class 6	2 digit 3 units and 1 digit 2 units、1 digit 8 units		
Class 7	1 digit 7 units		
Class 8	1 digit 6 units		
Class 9	1 digit 5 units		
Class 10	1 digit 4 units		
Class 11	1 digit 3 units		
Class 12	1 digit 3 units		

Mental all test papers are B4 sizes.

(3) Scope and Scoring Criteria

A. Mathematics Competition

- a. Scope (as Annex III)
 - (a) Kindergarten: According to the IAMA Test Standard proposition.
 - (b) Primary School: According to the curriculum standard proposition

issued by the Ministry of Education of Taiwan.

(c) Secondary School: According to Taiwan's secondary school mathematics basic scholastic test model and scope.

b. Scoring Criteria

- (a) According IAMA Test Scoring Criteria.
- (b) kindergarten: Choose the most appropriate option for each question. Written answers in the spaces marked on the <u>test paper</u>. No points for not written in spaces marked.
- (c) Primary and Secondary: Choose the most appropriate option for each question. Marked in the "answer column" of the answer sheet.
- (d) 10 points for each correct answer. 2 points will be deducted for wrong answers or marking more than one option. Back down until the actual points reaches zero. No Points for non-respondents.

B. Mental Arithmetic Competition

a. Scope: According to the IAMA Test Standards Proposition. The scope like as previous page showing

b. Scoring Criteria

- (a) The answer should be written in Arabic numerals.
- (b) The answer must be written in clear. unclear or ambiguous null is invalid.
- (c) Whatever the answer is correct or not. answer a question there are two or more are invalid.
- (d) Where the integer part of the answer, if three or more, regardless of the denominate-number or abstract-number, each accompanied by three point "," attached to the wrong place, or lack the three points are invalid.
- (e) The answer is pure decimal point must be attached to the left bit "0" character, otherwise is invalid.
 - (Example) The answer 0.123, written as .123 is invalid.
- (f) Decimal point "." and three-point "," must separately clear, otherwise it is invalid.

- (Example) The answer 1,234.56, written as 1.234,56 or 1,234,56 are invalid.
- (g) The answer can not be attached to the end of loci ".", Otherwise it is invalid. (Example) The answer 13.67, written as 13.67 .. is invalid.
- (h) The answer for the abstract-number of pure decimal or decimal. If decimal part was zero, regardless of whether there is round off. can't write zero. Otherwise it is invalid.
 - (Example) Abstract-number can't written as 13.00
- (i) The answer for the denominate-number. The decimal part regardless of whether there is round off. must write zero. Otherwise it is invalid.
 - (Example 1) The answer \$2.50, written as \$2.5 is invalid.
 - (Example 2) The answer \$1,234.00, written as \$1,234 or \$1,234- are invalid.
 - (Example 3) The answer \$1,234.00, written as \$1,234.- is valid.
- (i) Draw a horizontal line in the answer below is invalid. (Example) \$1.23 or 1.2345
- (k) If the answer is written mistaken. Two horizontal line must be drawn after the cancellation of all of the digital. Rewrite the answer. Any of the following circumstances is invalid.
 - % Fixed the answer only drawn a part. (Example) $\frac{1,234.56}{6}$ or $\frac{1,234.56}{6}$
 - * Altered or overwritten.
 - * Does not eliminate the use of rubber eraser clean, can not tell when clear.
- (l) Write the answers unrelated characters or symbols in the papers. It is invalid.

(4) Ranking Rules

Mathematics and Mental Arithmetic Competition each play two items.

The second item (Set 2) is same score supplementary competition. The ranking rules as

- a. Individual
 - (a) Ranking by the first-item (Set 1) score.
 - (b) When the score is same, ranking by the second-item (Set 2) score.
 - (c) If still is same, ranking by date of birth(DOB).
 - (d) If DOB still is same, draw lots to decide ranked.
- b. Group
 - (a) Ranking by the first-item (Set 1) score. (3 students total scores)
 - (b) When the score is same, ranking by the second-item (Set 2) score. (3 students total scores)
 - (c) If still is same, draw lots to decide ranked.

11. Registration Form

- (1) Registration procedure
 - A. Only accept registration from each unit. Mathematics and Mental Arithmetic written in the registration form separately.(Annex I) and stamp the seal of the participating units; Participants in the Group Competition should indicate this on the registration form.
 - B. Completes the registration form, please by

fax: 886-2-23512859

e-mail: power.cat@msa.hinet.net

LINE: powerdog888

mail: I.A.M.A 886-2-23211309

No.8, Ln. 3, Tai'an St., JhongJheng Dist., Taipei City 10054, Taiwan

- C. Individual participants are not allowed to register separately. Please register in IAMA Test Area or participating units. For details, please contact the IAMA Secretariat (Tel. same as above)
- (2) Registration Fee (Participate in the Group Competition at no extra charge)
 - A. Taiwan participating units

Mathematics and Mental Arithmetic Competition each TWD 1000

Please by "Taiwan Postal Transfer" to

Account Name:國際珠算聯合會中華民國分會

Account Number: 01094388

B. Each country participating units (Except Taiwan and HongKong)

Mathematics and Mental Arithmetic Competition each US 35 Please pay to the IAMA Branch of Taiwan or tele-transfer to

Tele-Transfer Instruction:

Beneficiary Bank:

The Hongkong and Shanghai Banking Corporation Limited Panchiao Branch

SWIFT Code : HSBCTWTP

Bank Address:

No.285, Sec. 2, Wunhua Rd., Banciao Dist., New Taipei City 22046, Taiwan

Beneficiary A/C Name:

CHANG CHING LIANG (張欽梁)

Beneficiary A/C No.:

006-029565-388 (TWD) 006-029565-821 (USD)

12. Reward and Trophies and Certificate Statistics:

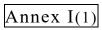
- (1) Trophies and Certificate Statistics as Annex II.
- (2) 1st, 2nd and 3rd Place the reward is Trophies and Certificate.
- (3) 4th Place the reward is Certificate.

13. Attention Item

- (1) The contestant participates depending on the participation card and receives the awarding cup, please properly takes care, in order to avoid loses the qualifications, the awarding cup limits the same day to receive, after the competition even slightly does not reissue.
- (2) Each group of participants like have reduce the grade participation or assuming a false identity, after looks up is true, does not give the scoring besides this student, it receives the awarding cup, generally gives takes back.
- (3) Before the competition has not started, don't touch the test paper, both hands should put on the knee.
- (4) "After stops" the password issuing, should the stop calculation, lay down the pencil immediately, the turn over test paper puts both hands on the double knee, awaits calmly monitors an exam teacher to take back the test paper.
- (5) Each competition "start" and "stops", entirely depends on password of the this competition director primarily.
- (6) Violates (3), one of (4) two items, this test by zero score.
- (7) In mathematics and mental arithmetic competition, don't use any calculates the appliance.
- (8) Fills in answer should defer to "Scoring Criteria" the stipulation. When marking the answer sheets. Please be legible and do not exceed the answer column too much.
- (9) If you want to check the test paper. Please after same day result announcement, go to the scoring team. Mathematics and mental arithmetic competition reexamination fee each NT 200 (US 7). Like has the mistake, IAMA will reissues trophy, certificate and returns the reexamination fee.
- (10) If has any question for competition. Inquired by the Team Leader before the competition to the IAMA Secretariat.
- (11) If will have the not completely matters concerned place, separate will inform each participating units.

14. This implementation main point, after submits a report check implements, the revision also with.

15. End of the Competition 2024, See you next time.





2024年香港國際數學心算競賽報名表

The HongKong International Mathematics and Mental Arithmetic Competition 2024

隻	数 學 競 賽	國別				
	matics Competition	Nationality				
參賽單位 Linit		Tel.:		Add. :		
Unit 領 隊		T 1				
Leader		Tel.:		Add.:		
教 練 Coach		Tel. :		Add. :		
編號	選手姓名	國別或縣市別	出生日期	校別/年級	團體組	備註
No.	Name	Counties or Cities	D.O.B	School/Grade	Group	Note
1					·	
2						
3						
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20						

註:請備妥一吋半身照片,俟本會寄回參加證時,自行黏貼於參加證。

Note: Please stick the photo to the participation card.

Annex I(2)



2024年香港國際數學心算競賽報名表

The HongKong International Mathematics and Mental Arithmetic Competition 2024

	〉 算 競 賽	國別				
	Arithmetic Competition	Nationality				
參賽單位 Linit		Tel.:		Add. :		
Unit 領 隊		Tal .		A		
Leader		Tel.:		Add.:		
教 練 Coach		Tel.:		Add. :		
編號	選手姓名	國別或縣市別	出生日期	校別/年級	團體組	備註
No.	Name	Counties or Cities	D.O.B	School/Grade	Group	Note
1						
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註:請備妥一吋半身照片,俟本會寄回參加證時,自行黏貼於參加證。

Note: Please stick the photo to the participation card.

Annex II

Trophies and Certificate Statistics

1. Mathematics Competition

1. Mathematics	Compoun	•			
Individual	1St Place	2nd Place	3rd Place	4th Place	Note
Grade	(people)	(%)	(%)	(%)	Note
Kindergarten 2 (K2)	1				
Kindergarten 3 (K3)	1				
Primary 1 (P1)	1				
Primary 2 (P2)	1				
Primary 3 (P3)	1	Each	Each		1. 1st ~ 3rd Place send
Primary 4 (P4)	1			others	trophies and Certificate.
Primary 5 (P5)	1	20%	30%		4th Place send Certificate.
Primary 6 (P6)	1				
Grade 7 (G7)	1				
Grade 8 (G8)	1				
Grade 9 (G9)	1				
	-				
Groups	1St Place	2nd Place	3rd Place	4th Place	Noto
	1St Place (Team)	2nd Place (%)	3rd Place (%)	4th Place (%)	Note
Groups					Note
Groups Grade					Note
Groups Grade Kindergarten 2 (K2)	(Team) 1				Note
Groups Grade Kindergarten 2 (K2) Kindergarten 3 (K3)	(Team) 1 1				Note
Groups Grade Kindergarten 2 (K2) Kindergarten 3 (K3) Primary 1 (P1)	(Team) 1 1 1	(%)	(%)		Note 1. 1st ~ 3rd Place send
Groups Grade Kindergarten 2 (K2) Kindergarten 3 (K3) Primary 1 (P1) Primary 2 (P2)	(Team) 1 1 1 1 1	(%) Each	(%) Each		
Groups Grade Kindergarten 2 (K2) Kindergarten 3 (K3) Primary 1 (P1) Primary 2 (P2) Primary 3 (P3)	(Team) 1 1 1 1 1 1	(%)	(%)	(%)	1. 1st ~ 3rd Place send
Groups Grade Kindergarten 2 (K2) Kindergarten 3 (K3) Primary 1 (P1) Primary 2 (P2) Primary 3 (P3) Primary 4 (P4)	(Team) 1 1 1 1 1 1 1	(%) Each	(%) Each	(%)	1. 1st ~ 3rd Place send trophies and Certificate.
Groups Grade Kindergarten 2 (K2) Kindergarten 3 (K3) Primary 1 (P1) Primary 2 (P2) Primary 3 (P3) Primary 4 (P4) Primary 5 (P5)	(Team) 1 1 1 1 1 1 1 1 1	(%) Each	(%) Each	(%)	1. 1st ~ 3rd Place send trophies and Certificate.
Groups Grade Kindergarten 2 (K2) Kindergarten 3 (K3) Primary 1 (P1) Primary 2 (P2) Primary 3 (P3) Primary 4 (P4) Primary 5 (P5) Primary 6 (P6)	(Team) 1 1 1 1 1 1 1 1 1 1 1 1	(%) Each	(%) Each	(%)	1. 1st ~ 3rd Place send trophies and Certificate.

2. Mental Arithmetic Competition

2. Mental Arithm	ictic Com	poddon			
Individual	1St Place	2nd Place	3rd Place	4th Place	Note
Grade	(people)	(%)	(%)	(%)	note
Kindergarten 2 (K2)	1				
Kindergarten 3 (K3)	1				
Primary 1 (P1)	1				
Primary 2 (P2)	1				1. 1st ~ 3rd Place send
Primary 3 (P3)	1	Each20%	Each30%	others	trophies and Certificate.
Primary 4 (P4)	1				2. 4th Place send Certificate.
Primary 5 (P5)	1				
Primary 6 (P6)	1				
High and Secondary	1				
·	-				
Groups	1St Place	2nd Place	3rd Place	4th Place	Note
Groups Grade	1St Place (Team)	2nd Place (%)	3rd Place (%)	4th Place (%)	Note
•					Note
Grade					Note
Grade Kindergarten 2 (K2)					Note
Grade Kindergarten 2 (K2) Kindergarten 3 (K3)					Note 1. 1st ~ 3rd Place send
Grade Kindergarten 2 (K2) Kindergarten 3 (K3) Primary 1 (P1)					
Grade Kindergarten 2 (K2) Kindergarten 3 (K3) Primary 1 (P1) Primary 2 (P2)	(Team) 1 1 1 1	(%)	(%)	(%)	1. 1st ~ 3rd Place send
Grade Kindergarten 2 (K2) Kindergarten 3 (K3) Primary 1 (P1) Primary 2 (P2) Primary 3 (P3)	(Team) 1 1 1 1 1 1	(%)	(%)	(%)	1. 1st ~ 3rd Place send trophies and Certificate.
Grade Kindergarten 2 (K2) Kindergarten 3 (K3) Primary 1 (P1) Primary 2 (P2) Primary 3 (P3) Primary 4 (P4)	(Team) 1 1 1 1 1 1	(%)	(%)	(%)	1. 1st ~ 3rd Place send trophies and Certificate.

Annex III(1)

Kindergarten and Primary School mathematics competition proposition range

Range	item	Kindergarten K2	Kindergarten K3	Primary 1 (P1)	Primary 2 (P2)
Tunge	1	Add. and subtraction within 10	Add. and subtraction within 15	Number up to 10	Number up to 200
	•				-
	2	Shape recognition Compare	Graphics recognition Comparison (thickness, width, front and	Object length The order and magnitude of the	Vertical Addition of Two-digit
l H	3	(size, length, height, how much, firm or soft) Compare	rear, left and right, volume, length) Graphics (superposition, side view, shadow,	numbers	Vertical Subtraction of Two-digit
irs	4	(height, weight, age, strength, light and dark)	complement, expansion, movement)	Divide and combine	To measure
First semester	5	Graphic segmentation correspondence	Object correspondence	Know shapes	What time is it?
mes	6	Graphics sequence judgment	Graphics sequence discrimination	Addition within 10	Planes, Lines and Angles
ter	7	Number sequence (forward and reverse count)	Numerical sort (within 20)	Subtraction within 10	Two step problem and to estimate
	8	Plus and minus symbol discrimination	time corresponding	Number up to 30	Multiplication (1)
	9	Odd or even number discrimination	Water surface identification	What time and what time and a half	Multiplication (2)
	10	Written computing	Written computing	Where is it	Capacity and weight
	1	Add. and subtraction within 10	Add. and subtraction within 20	Numbers up to 100	Number up to 1000
	2	Shape recognition and complementation	3D figure recognition	Addition and subtraction within 20	Multiplication (1)
7.0	3	Compare (size, length, height, volume, speed, amount)	Compare (front to back, side to side, volume, length, weight)	The length	Addition and subtraction within 1000
Seco	4	Graphics (reverse, top view, unfold)	Graphics (resolution, combination, superimposition, mirroring, direction,	What date is it today? What day is it today?	Year, month and week
Second semester	5	Identification of the same and different species	Footprints, afterimage connection	Graphics and Shapes	Meters and centimeters
sen	6	Graphics sequence identification	Graphic classification	Two-digit addition	Plane graphics and 3D shapes
ıest	7	Multiple calculation	Number sequence	The coin	Multiplication (2)
er	8	Plus and minus symbol judgment	(forward and reverse within 20) Know the time and what time	Two-digit subtraction	Two step problem
	9	Odd and even number identification	and a half Water surface identification	Use money	Divide and divide equally
	10	written computing	Written computing	Make a record	Know fraction
		witten companing	· · · · · · · · · · · · · · · · · · ·	Trialle a record	The Wilder
Range	item	Primary 3 (P3)	Primary 4 (P4)	Primary 5 (P5)	Primary 6 (P6)
Range		Primary 3 (P3)	Primary 4 (P4)	Primary 5 (P5) Addition and subtraction of	Primary 6 (P6)
Range	1	Number line	Numbers up to 100 million	Addition and subtraction of decimals	Primary 6 (P6) Prime numbers and Prime factors Greatest common factor and
Range	1 2	Number line Numbers up to 10000	Numbers up to 100 million Multiplication	Addition and subtraction of	Prime numbers and Prime factors Greatest common factor and Least common multiple
	1 2 3	Number line Numbers up to 10000 Addition and subtraction of 4-digit	Numbers up to 100 million Multiplication Angle	Addition and subtraction of decimals Factors and Multiples Expansion, reduction, and generalization of fraction	Prime numbers and Prime factors Greatest common factor and Least common multiple Division of fractions
	1 2 3 4	Number line Numbers up to 10000 Addition and subtraction of 4-digit Angle	Numbers up to 100 million Multiplication Angle Division	Addition and subtraction of decimals Factors and Multiples Expansion, reduction, and generalization of fraction Polygons and Sectors	Prime numbers and Prime factors Greatest common factor and Least common multiple Division of fractions Division of decimals
	1 2 3 4 5	Number line Numbers up to 10000 Addition and subtraction of 4-digit Angle Multiplication	Numbers up to 100 million Multiplication Angle Division Triangle	Addition and subtraction of decimals Factors and Multiples Expansion, reduction, and generalization of fraction Polygons and Sectors Addition and subtraction of fractions with different denominators	Prime numbers and Prime factors Greatest common factor and Least common multiple Division of fractions Division of decimals Bar and Line charts
	1 2 3 4	Number line Numbers up to 10000 Addition and subtraction of 4-digit Angle Multiplication Boundary and Perimeter	Numbers up to 100 million Multiplication Angle Division	Addition and subtraction of decimals Factors and Multiples Expansion, reduction, and generalization of fraction Polygons and Sectors Addition and subtraction of fractions	Prime numbers and Prime factors Greatest common factor and Least common multiple Division of fractions Division of decimals Bar and Line charts Pi, Circumference, and Circle Area
First semester	1 2 3 4 5	Number line Numbers up to 10000 Addition and subtraction of 4-digit Angle Multiplication	Numbers up to 100 million Multiplication Angle Division Triangle	Addition and subtraction of decimals Factors and Multiples Expansion, reduction, and generalization of fraction Polygons and Sectors Addition and subtraction of fractions with different denominators	Prime numbers and Prime factors Greatest common factor and Least common multiple Division of fractions Division of decimals Bar and Line charts
	1 2 3 4 5 6	Number line Numbers up to 10000 Addition and subtraction of 4-digit Angle Multiplication Boundary and Perimeter Addition and subtraction	Numbers up to 100 million Multiplication Angle Division Triangle Arithmetic on integers	Addition and subtraction of decimals Factors and Multiples Expansion, reduction, and generalization of fraction Polygons and Sectors Addition and subtraction of fractions with different denominators Multiplication and Division Integer four arithmetic operations	Prime numbers and Prime factors Greatest common factor and Least common multiple Division of fractions Division of decimals Bar and Line charts Pi, Circumference, and Circle Area Ratio, Ratio value, and
	1 2 3 4 5 6 7	Number line Numbers up to 10000 Addition and subtraction of 4-digit Angle Multiplication Boundary and Perimeter Addition and subtraction combining and estimating	Numbers up to 100 million Multiplication Angle Division Triangle Arithmetic on integers Fraction	Addition and subtraction of decimals Factors and Multiples Expansion, reduction, and generalization of fraction Polygons and Sectors Addition and subtraction of fractions with different denominators Multiplication and Division Integer four arithmetic operations	Prime numbers and Prime factors Greatest common factor and Least common multiple Division of fractions Division of decimals Bar and Line charts Pi, Circumference, and Circle Area Ratio, Ratio value, and Proportional Graphical scaling
	1 2 3 4 5 6 7	Number line Numbers up to 10000 Addition and subtraction of 4-digit Angle Multiplication Boundary and Perimeter Addition and subtraction combining and estimating Division	Numbers up to 100 million Multiplication Angle Division Triangle Arithmetic on integers Fraction Calculation of capacity and weight	Addition and subtraction of decimals Factors and Multiples Expansion, reduction, and generalization of fraction Polygons and Sectors Addition and subtraction of fractions with different denominators Multiplication and Division Integer four arithmetic operations Area	Prime numbers and Prime factors Greatest common factor and Least common multiple Division of fractions Division of decimals Bar and Line charts Pi, Circumference, and Circle Area Ratio, Ratio value, and Proportional Graphical scaling Axioms of equality Regular problem
	1 2 3 4 5 6 7 8	Number line Numbers up to 10000 Addition and subtraction of 4-digit Angle Multiplication Boundary and Perimeter Addition and subtraction combining and estimating Division Circle	Numbers up to 100 million Multiplication Angle Division Triangle Arithmetic on integers Fraction Calculation of capacity and weight Decimal	Addition and subtraction of decimals Factors and Multiples Expansion, reduction, and generalization of fraction Polygons and Sectors Addition and subtraction of fractions with different denominators Multiplication and Division Integer four arithmetic operations Area Multiplication and division of time	Prime numbers and Prime factors Greatest common factor and Least common multiple Division of fractions Division of decimals Bar and Line charts Pi, Circumference, and Circle Area Ratio, Ratio value, and Proportional Graphical scaling Axioms of equality
	1 2 3 4 5 6 7 8 9	Number line Numbers up to 10000 Addition and subtraction of 4-digit Angle Multiplication Boundary and Perimeter Addition and subtraction combining and estimating Division Circle Fraction	Numbers up to 100 million Multiplication Angle Division Triangle Arithmetic on integers Fraction Calculation of capacity and weight Decimal Statistical graph	Addition and subtraction of decimals Factors and Multiples Expansion, reduction, and generalization of fraction Polygons and Sectors Addition and subtraction of fractions with different denominators Multiplication and Division Integer four arithmetic operations Area Multiplication and division of time Line Symmetry Graphics	Prime numbers and Prime factors Greatest common factor and Least common multiple Division of fractions Division of decimals Bar and Line charts Pi, Circumference, and Circle Area Ratio, Ratio value, and Proportional Graphical scaling Axioms of equality Regular problem The Four Arithmetic Operations of
First semester	1 2 3 4 5 6 7 8 9 10	Number line Numbers up to 10000 Addition and subtraction of 4-digit Angle Multiplication Boundary and Perimeter Addition and subtraction combining and estimating Division Circle Fraction Mllimeter	Numbers up to 100 million Multiplication Angle Division Triangle Arithmetic on integers Fraction Calculation of capacity and weight Decimal Statistical graph More than one hundred million	Addition and subtraction of decimals Factors and Multiples Expansion, reduction, and generalization of fraction Polygons and Sectors Addition and subtraction of fractions with different denominators Multiplication and Division Integer four arithmetic operations Area Multiplication and division of time Line Symmetry Graphics Volume of cuboids and cubes	Prime numbers and Prime factors Greatest common factor and Least common multiple Division of fractions Division of decimals Bar and Line charts Pi, Circumference, and Circle Area Ratio, Ratio value, and Proportional Graphical scaling Axioms of equality Regular problem The Four Arithmetic Operations of Decimals and Fractions Rate Shape relationships, Volume and Surface area
First semester	1 2 3 4 5 6 7 8 9 10 1	Number line Numbers up to 10000 Addition and subtraction of 4-digit Angle Multiplication Boundary and Perimeter Addition and subtraction combining and estimating Division Circle Fraction Mllimeter Multiplication	Numbers up to 100 million Multiplication Angle Division Triangle Arithmetic on integers Fraction Calculation of capacity and weight Decimal Statistical graph More than one hundred million Kilometer	Addition and subtraction of decimals Factors and Multiples Expansion, reduction, and generalization of fraction Polygons and Sectors Addition and subtraction of fractions with different denominators Multiplication and Division Integer four arithmetic operations Area Multiplication and division of time Line Symmetry Graphics Volume of cuboids and cubes Calculation of fraction	Prime numbers and Prime factors Greatest common factor and Least common multiple Division of fractions Division of decimals Bar and Line charts Pi, Circumference, and Circle Area Ratio, Ratio value, and Proportional Graphical scaling Axioms of equality Regular problem The Four Arithmetic Operations of Decimals and Fractions Rate Shape relationships, Volume and Surface
First semester	1 2 3 4 5 6 7 8 9 10 1 2	Number line Numbers up to 10000 Addition and subtraction of 4-digit Angle Multiplication Boundary and Perimeter Addition and subtraction combining and estimating Division Circle Fraction Mllimeter Multiplication The time	Numbers up to 100 million Multiplication Angle Division Triangle Arithmetic on integers Fraction Calculation of capacity and weight Decimal Statistical graph More than one hundred million Kilometer Fraction	Addition and subtraction of decimals Factors and Multiples Expansion, reduction, and generalization of fraction Polygons and Sectors Addition and subtraction of fractions with different denominators Multiplication and Division Integer four arithmetic operations Area Multiplication and division of time Line Symmetry Graphics Volume of cuboids and cubes Calculation of fraction Volume and capacity	Prime numbers and Prime factors Greatest common factor and Least common multiple Division of fractions Division of decimals Bar and Line charts Pi, Circumference, and Circle Area Ratio, Ratio value, and Proportional Graphical scaling Axioms of equality Regular problem The Four Arithmetic Operations of Decimals and Fractions Rate Shape relationships, Volume and Surface area Fundamental quantity and Comparative
First semester	1 2 3 4 5 6 7 8 9 10 1 2 3 4	Number line Numbers up to 10000 Addition and subtraction of 4-digit Angle Multiplication Boundary and Perimeter Addition and subtraction combining and estimating Division Circle Fraction Mllimeter Multiplication The time Decimal	Numbers up to 100 million Multiplication Angle Division Triangle Arithmetic on integers Fraction Calculation of capacity and weight Decimal Statistical graph More than one hundred million Kilometer Fraction Quadrilateral	Addition and subtraction of decimals Factors and Multiples Expansion, reduction, and generalization of fraction Polygons and Sectors Addition and subtraction of fractions with different denominators Multiplication and Division Integer four arithmetic operations Area Multiplication and division of time Line Symmetry Graphics Volume of cuboids and cubes Calculation of fraction Volume and capacity Multiplication of decimals	Prime numbers and Prime factors Greatest common factor and Least common multiple Division of fractions Division of decimals Bar and Line charts Pi, Circumference, and Circle Area Ratio, Ratio value, and Proportional Graphical scaling Axioms of equality Regular problem The Four Arithmetic Operations of Decimals and Fractions Rate Shape relationships, Volume and Surface area Fundamental quantity and Comparative quantity
First semester	1 2 3 4 5 6 7 8 9 10 1 2 3 4 5	Number line Numbers up to 10000 Addition and subtraction of 4-digit Angle Multiplication Boundary and Perimeter Addition and subtraction combining and estimating Division Circle Fraction Mllimeter Multiplication The time Decimal Liters and milliliters Area Addition and subtraction of	Numbers up to 100 million Multiplication Angle Division Triangle Arithmetic on integers Fraction Calculation of capacity and weight Decimal Statistical graph More than one hundred million Kilometer Fraction Quadrilateral Perimeter and Area	Addition and subtraction of decimals Factors and Multiples Expansion, reduction, and generalization of fraction Polygons and Sectors Addition and subtraction of fractions with different denominators Multiplication and Division Integer four arithmetic operations Area Multiplication and division of time Line Symmetry Graphics Volume of cuboids and cubes Calculation of fraction Volume and capacity Multiplication of decimals Surface area	Prime numbers and Prime factors Greatest common factor and Least common multiple Division of fractions Division of decimals Bar and Line charts Pi, Circumference, and Circle Area Ratio, Ratio value, and Proportional Graphical scaling Axioms of equality Regular problem The Four Arithmetic Operations of Decimals and Fractions Rate Shape relationships, Volume and Surface area Fundamental quantity and Comparative quantity How to solve the problem
	1 2 3 4 5 6 7 8 9 10 1 2 3 4 5	Number line Numbers up to 10000 Addition and subtraction of 4-digit Angle Multiplication Boundary and Perimeter Addition and subtraction combining and estimating Division Circle Fraction Mllimeter Multiplication The time Decimal Liters and milliliters Area	Numbers up to 100 million Multiplication Angle Division Triangle Arithmetic on integers Fraction Calculation of capacity and weight Decimal Statistical graph More than one hundred million Kilometer Fraction Quadrilateral Perimeter and Area Multiplication of decimals Approximate number Integer four arithmetic mixed	Addition and subtraction of decimals Factors and Multiples Expansion, reduction, and generalization of fraction Polygons and Sectors Addition and subtraction of fractions with different denominators Multiplication and Division Integer four arithmetic operations Area Multiplication and division of time Line Symmetry Graphics Volume of cuboids and cubes Calculation of fraction Volume and capacity Multiplication of decimals Surface area Integer, decimal divided by integer	Prime numbers and Prime factors Greatest common factor and Least common multiple Division of fractions Division of decimals Bar and Line charts Pi, Circumference, and Circle Area Ratio, Ratio value, and Proportional Graphical scaling Axioms of equality Regular problem The Four Arithmetic Operations of Decimals and Fractions Rate Shape relationships, Volume and Surface area Fundamental quantity and Comparative quantity How to solve the problem Circular chart
First semester	1 2 3 4 5 6 7 8 9 10 1 2 3 4 5 6 7	Number line Numbers up to 10000 Addition and subtraction of 4-digit Angle Multiplication Boundary and Perimeter Addition and subtraction combining and estimating Division Circle Fraction Mllimeter Multiplication The time Decimal Liters and milliliters Area Addition and subtraction of fractions Division	Numbers up to 100 million Multiplication Angle Division Triangle Arithmetic on integers Fraction Calculation of capacity and weight Decimal Statistical graph More than one hundred million Kilometer Fraction Quadrilateral Perimeter and Area Multiplication of decimals Approximate number	Addition and subtraction of decimals Factors and Multiples Expansion, reduction, and generalization of fraction Polygons and Sectors Addition and subtraction of fractions with different denominators Multiplication and Division Integer four arithmetic operations Area Multiplication and division of time Line Symmetry Graphics Volume of cuboids and cubes Calculation of fraction Volume and capacity Multiplication of decimals Surface area Integer, decimal divided by integer Big unit in life List equation and Problem solving	Prime numbers and Prime factors Greatest common factor and Least common multiple Division of fractions Division of decimals Bar and Line charts Pi, Circumference, and Circle Area Ratio, Ratio value, and Proportional Graphical scaling Axioms of equality Regular problem The Four Arithmetic Operations of Decimals and Fractions Rate Shape relationships, Volume and Surface area Fundamental quantity and Comparative quantity How to solve the problem Circular chart Mean, Median and Mode Plane coordinates Proportional and inversely
First semester	1 2 3 4 5 6 7 8 9 10 1 2 3 4 5 6 7 8	Number line Numbers up to 10000 Addition and subtraction of 4-digit Angle Multiplication Boundary and Perimeter Addition and subtraction combining and estimating Division Circle Fraction Mllimeter Multiplication The time Decimal Liters and milliliters Area Addition and subtraction of fractions	Numbers up to 100 million Multiplication Angle Division Triangle Arithmetic on integers Fraction Calculation of capacity and weight Decimal Statistical graph More than one hundred million Kilometer Fraction Quadrilateral Perimeter and Area Multiplication of decimals Approximate number Integer four arithmetic mixed calculation	Addition and subtraction of decimals Factors and Multiples Expansion, reduction, and generalization of fraction Polygons and Sectors Addition and subtraction of fractions with different denominators Multiplication and Division Integer four arithmetic operations Area Multiplication and division of time Line Symmetry Graphics Volume of cuboids and cubes Calculation of fraction Volume and capacity Multiplication of decimals Surface area Integer, decimal divided by integer Big unit in life	Prime numbers and Prime factors Greatest common factor and Least common multiple Division of fractions Division of decimals Bar and Line charts Pi, Circumference, and Circle Area Ratio, Ratio value, and Proportional Graphical scaling Axioms of equality Regular problem The Four Arithmetic Operations of Decimals and Fractions Rate Shape relationships, Volume and Surface area Fundamental quantity and Comparative quantity How to solve the problem Circular chart Mean, Median and Mode Plane coordinates

Note: (1) The math competition standard is based on the latest curriculum standard of the Taiwan Ministry of Education (108 Curriculum).

(2) The competition test consists of 60 multiple-choice questions (each question is 10 points, Total is 600 points).

Annex III(2)

Secondary School mathematics competition proposition range

Seventh Grade (G7)

First semester

Chapter 1 Factors and Multiples

- 1-1 Use symbols to represent numbers and exponent laws
- 1-2 Factors, Multiples, and Prime Numbers
- 1-3 Common factors and common multiples

Chapter 2 Negative Numbers

- 2-1 Know negative numbers
- 2-2 Addition and subtraction
- 2-3 Multiplication and division
- 2-4 Number lines
- 2-5 Scientific Notations

Chapter 3 First degree equations with one unknown

- 3-1 Listed in symbols
- 3-2 The first degree equations operation
- 3-3 Solutions of first degree equations with one unknown
- 3-4 Application of first degree equations with one unknown

Second semester

Chapter 1 System of linear simultaneous equations in two unknowns

- 1-1 List by system of linear equations in two unknowns
- 1-2 Elimination by substitution
- 1-3 Elimination by addition or subtraction
- 1-4 Application of system of linear simultaneous equations in two unknown

Chapter 2 Ratio

- 2-1 Ratio
- 2-2 Proportion and continued ratio
- 2-3 Proportional and inverse proportional

Chapter 3 Functions and rectangular coordinates

- 3-1 Function
- 3-2 Rectangular coordinates
- 3-3 Functions and graphics
- 3-4 Graphics of system of linear equations in two unknowns

Chapter 4 Inequality

- 4-1 Understanding inequality
- 4-2 Properties of inequality
- 4-3 Inequality and Number lines
- 4-4 linear inequality with one unknown

Eighth Grade (G8)

First semester

Chapter 1 Multiplication Formulas and Polynomials

- 1-1 Multiplication formula
- 1-2 polynomials and their addition and subtraction
- 1-3. Multiplication and division of polynomials

Chapter 2 Pythagorean Theorem and Square Root

- 2-1 Pythagorean theorem
- 2-2 square roots and approximations
- 2-3 Operations of Radicals
- 2-4 Application of Pythagorean Theorem

Chapter 3 Factorization of Polynomials

- 3-1 Multiplication formula and method of proposing common factor
- 3-2 Cross method

Chapter 4 Quadratic equation with one unknown

- 4-1 Solve by factorization method
- 4-2 Compounding method and formula solution
- 4-3 Application of quadratic equation in with one unknown

Second semester

Chapter 1 Sequence and series

- 1-1 Arithmetic sequence
- 1-2 Arithmetic progression

Chapter 2 Angles of geometric figures

- 2-1 Angles of a triangle
- 2-2 Interior and exterior angles of polygons
- 2-3 Parallel and vertical

Chapter 3 Basic Properties of Triangles

- 3-1 The concept of congruence
- 3-2 SSS congruence and Geometric construction
- 3-3 Properties of Angles and Sides of Triangles

Chapter 4 Geometric Figures

- 4-1 Parallelogram
- 4-2 Line Symmetry and Geometric Figures
- 4-3 Perimeter and area
- 4-4 Surface area and volume

Ninth Grade (G9)

First semester

Chapter 1 Similar Triangles

- 1-1 Scaling
- 1-2 Similar triangles
- 1-3 Application of similar figures

Chapter 2 Circle

- 2-1 Circle
- 2-2 Circle and Angle
- 2-3 Circles and polygons (including three centres)
- 2-4 Mathematics Proof

Chapter 3 Quadratic Functions

- 3-1 Quadratic functions and graphs
- 3-2 Compounding method and parabola

Second semester

Chapter 1 Probability and Statistics

- 1-1 Data statistics and analysis
- 1-2 Data distribution
- 1-3 Probability

Chapter 2 Review and Prospect

- 2-1 Number and quantity
- 2-2 Algebra
- 2-3 Geometry
- 2-4 Comprehensive problem solving