THE IAM RULEBOOK

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Official Rulebook

of the

International Association of Memory (IAM)

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IAM Rulebook

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1) Competitions

a) Requirements

For any competition to be recognized as an official IAM competition, the following requirements must be met:

1. The competition must be open to anyone who wants to participate - regardless of age, gender or nationality.
2. The competition must be announced on the IAM website at least 1 month before the competition date with instructions on how someone can register for the same. The organizer is expected to inform the IAM in time about the event, so that the announcement can take place.
3. The competition must have an IAM recognized arbiter physically present at the competition. IAM recognized arbiters who can direct ranked events are:
   a. Arbiters from Africa: Charifa Souissi
   b. Arbiters from the Americas: Florian Dellé
   c. Arbiters from Asia: AB Bonita, Andy Fong, Angel Lai, Baasandorj Battulga, Dr. Kranthi Raj, Khatanbaatar Khandsuren, Takeru Aoki, Vincent Chin, Wellon Chou, Yudi Lesmana
   d. Arbiters from Europe: Ben Pridmore, Dr. Boris Konrad, Idriz Zogaj, Klaus Kolb, Nathalie Lecordier
4. In exceptional cases, the organizer may raise a request for the competition to be monitored by remote arbiting through live stream of the competition. All requests for remote arbiting will be handled on a case-by-case basis at the discretion of the IAM Board.
5. The organizing team may decide to give prizes to a certain subset of competitors, for example based on nationality in case of national championships. However, such restrictions should be communicated with the competition announcement.

b) Formats

A competition may be held in one of the 4 formats - on paper, paper memorization + digital recall, fully digital or mixed:

1. ### On Paper
   In the traditional format, all disciplines are handled on paper - both memorization and recall. The exception is speed cards, which is done with real cards, and other cards disciplines, where the memorization is done with real cards and recall is on paper.

2. ### Paper memorization + digital recall
   Such a competition can currently be done on the Standard Memory software by Daniel Andersson. Competitors are generally expected to use digital recall but they can request to do recall on paper. The request needs to be made at least one month before the tournament. The main arbiter can grant such a request in case of good cause according to their discretion.

3. ### Fully Digital
   In the digital format, all disciplines are handled digitally using IAM competition software. The exception is speed cards which is done with real cards. Competitors are generally expected to do the event fully digitally, but they can request to do memorization and/or recall on paper. The request needs to be made at least one

month before the tournament. The main arbiter can grant such a request in case of good cause according to their discretion.

4. Mixed

In this format, competitors have a choice between doing disciplines on paper or digitally. They may also specify to the organizer a subset of disciplines which they do on paper and others which they do digitally. Competitors need to let the organizer know whether they are recalling on paper or digitally at least one week before the competition.

2) Brief Discipline Overview

Discipline	Memorization Time	Recall Time	Points per full row / column / deck	Points per date / name / digit / card / word	Points for full row / deck / unit with 1 error	Points for full row / deck / unit with 2 or more errors
Words	5 minutes 15 minutes	15 minutes 40 minutes	20 per column	-	10 points	0 points
Binary Digits	5 minutes 30 minutes	15 minutes 60 minutes	30 per row	-	15 points	0 points
Cards	10 minutes 30 minutes 60 minutes	30 minutes 60 minutes 120 minutes	52 per deck	-	26 points	0 points
Numbers	5 minutes 15 minutes 30 minutes 60 minutes	15 minutes 30 minutes 60 minutes 120 minutes	40 per row	-	20	0
Images	5 minutes	15 minutes	5 per row	-	-1 point	-1 points
Dates	5 minutes	15 minutes		1	-0.5 per incorrect date	-0.5 per incorrect date
Names and Faces	5 minutes 15 minutes	15 minutes 30 minutes		1	0	0
Spoken Numbers	100 digits 200 digits 300 digits 550 digits	5 minutes 10 minutes 15 minutes 25 minutes		1	Counts up to the first mistake	n/a
Speed Cards	5 minutes	5 minutes		1	Counts up to the first mistake	n/a

3) Discipline Introduction

a) Words

1. Provided on memorization sheet: 20 words per column, 5 columns per page.
2. The memorization sheet contains, in random order: 80% concrete nouns, 10% abstract nouns, 10% verbs in the infinitive form.
3. The memorization sheet does NOT contain: Adjectives, adverbs, etc… Also, in any translation, it contains no nouns in the plural form if such a word describes a multitude of things (so: "jeans" or "trousers" would be allowed, but "trees" or "ants" would be forbidden).
4. The memorization does not contain words with a hyphen or more than one word in a single cell, even if such a word describes a single thing or entity (example: "vacuum cleaner" is not allowed).
5. Direction of memorization: from top to bottom.
6. The words have numbers next to them.

b) Binary

1. Provided on memorization sheet: 30 digits per row. 30 rows per page.
2. Direction of memorization: from left to right.

c) Names

1. Provided on memorization sheet: 5 faces per row, 3 rows per page printed on A3 size sheets in color OR 3 faces per row, 3 rows per page printed on A4 size sheets in color.
2. Direction of memorization: none.
3. Provided on recall sheet: faces without names, in a different order than on memorization sheet.
4. Names will only appear once on the memorization sheet.
5. Anti-guessing: Penalty for writing the same name more than twice (0.5 per name).

d) Cards

1. Provided: shuffled decks of cards (as many as were provided by the competitor).

e) Numbers

1. Provided on memorization sheet: 40 digits per row, 25 rows per page.
2. Direction of memorization: from left to right.

f) Images

1. Provided on memorization sheet: 5 pictures per row, 10 rows per page.
2. Direction of memorization: left to right.
3. Provided on recall sheet: pictures per row in a shuffled sequence, competitors need to write the correct sequence number below the picture.
4. For the last row, only a full correct row gives 5 points. There are no partial marks. A row with less than 5 images receives a penalty of -1, even if all the (1 to 4) recalled images are happening to be correct.

g) Dates

1. Provided on memorization sheet: 40 events per page for paper-based eventw, each event of length 1 to 6 words.
2. Direction of memorization: none.
3. Provided on recall sheet: scrambled events without dates, competitors must write the correct year corresponding to the event.
4. The years for this event are from 1000 to 2099.
5. Events and/or dates are fictional in nature so as to exclude any advantage stemming from a previous knowledge of History.

h) Spoken Numbers

1. Competitors memorize digits spoken by a software in a rhythm of one digit per second.
2. Different competitions may use different systems to notify the competitors of the first digit to be memorized - some may start directly, some may start with a countdown from 9 to 0, some say start with a,b,c. Competitors will be instructed of the system being used before the start of the first trial.

i) Speed Cards

1. Competitors need to hand in 4 decks for speed cards; two of which are meant for recall and two for memorization.
2. After the total memorization time is over, competitors bring the unshuffled deck into the same order as the shuffled deck within 5 minutes.
3. For competitors expecting to memorize in less than 5 minutes, an Speedstacks timer or a similar device that is being stopped with two hands must be used by the competitor. Competitors with decreased hand dexterity can request to use a timer that can be stopped with one hand, for example via an app.

4) General Marking Rules

a) Marking of last line

The last row, column or deck does not need to be recalled in full. It is marked up to the last entered data. If there are errors in the last row, column or deck, the penalties apply as mentioned above in the brief discipline overview. The exception to this rule is the Images event, where also the last row needs to be recalled in full or the usual penalty applies.

b) Rounding up

If the raw score of one discipline ends in a half mark (0.5), then the half mark is rounded up. Negative results are adjusted to 0.

c) Notes regarding inserting/deleting data

At times it happens that competitors leave out memorized data at some point during recall. If this is the case, the competitor is allowed to make a note on the recall sheet detailing where which information has to be added. (Example: competitor makes an arrow pointing at row 5, cell 7 on a Numbers recall sheet and writes: "note: insert here 4689, all subsequent numbers are shifted." . If this is correct, it counts. While this makes arbiting more difficult, it is allowed to honor the correct memorization. In digital recall with the IAM software, competitors are expected to use the inherent function to insert and delete data for the same purpose.

d) Personal details on recall sheet

Competitors are required to put their name and competitor ID on the recall sheet. When collecting the recall sheets, arbiters make sure that there is a name and ID on it.

e) Marking by two arbiters

For competitions on paper, each submitted recall sheet needs to be marked by two arbiters. If they agree on the raw score, they hand it over to the person in charge of entering the results. If they disagree, they discuss the specific points causing the discrepancy. If the disagreement persists, the main arbiter of the tournament is called for making a judgement.

f) Digital Words: Special marking rules

If recalling digitally, the discipline 'Words' needs to be checked for any spelling mistakes that the software might have considered as full mistakes. This is done only when competitors question their score which they need to do immediately after the recall time is over: Once recall finishes, the arbiter asks if there are any requests to check specific markings and competitors need to raise their hand to request a manual review. If such a request is not made, the score the software provides will be deemed the result of the event.

g) Software familiarization

For digital and mixed competitions, competitors need to familiarize themselves with the software beforehand. The arbiter and organizer shall aim to provide the athletes with a written overview of the software functions in time before the event.

5) Marking Rules Per Discipline

a) Words

1. Words must be marked by someone competent in the given language. The organizer must make sure that there are suitable people for all languages being used in the competition.
2. If a word has two or more officially recognized spellings in a language (for example: favourite vs favorite, Delphin vs Delfin), both spellings count as correct.
3. If a word is spelled wrongly on the memorization sheet and the competitor recalls the correct word without a spelling mistake, that is correct as well.
4. If a competitor remembers the word but spells it wrongly otherwise, a -1 is awarded. Spelling error vs. memorization error: If it is clear to the arbiter which word is meant (no ambiguity) and it is only spelt incorrectly (example: houze), it counts as a spelling error.
5. Synonyms or singular / plural mistakes are mistakes and halve the points of the column (ex: get / receive; ant / ants). Note that the memorization sheet will not contain plurals (for details see below), so plural mistakes should be avoidable.
6. A missing or wrong accent counts as a spelling error. Exception: If by omitting the accent or by writing the wrong accent, another word with a separate meaning is formed, the mistake counts as a full mistake.
7. If a spelling error and a gap / mistake coincide in the same column, halve first and subtract for spelling errors afterwards (example: column of 20 words, one mistake and one spelling error = halve first 20/2=10, then subtract 10-1=9. That gives a raw score of 9 for the column)

b) Binary Digits

1. Printed transparent sheets are recommended for marking (the transparent sheets are equal to the memorization sheets).
2. It is allowed to leave blanks instead of writing 0 OR leaving blanks instead of writing 1. This is allowed as long as it is done consistently for the recall and needs to be indicated by the competitor on the recall sheet. If a competitor does not indicate this on the recall sheet, but writes consistently acc. to this rule, it is up to the arbiter's discretion whether to allow it. Competitors who use blanks instead of 0 or 1 are required to indicate the last cell of their recall. In the absence of such an indicator, the last written 0 or 1 will mark the conclusion of the recall.

c) Names and Faces

1. Names need to be spelt correctly in order for them to count.
2. No first or last name must appear more than twice on the recall sheet. From the third name on, there is a penalty of -0.5 for each. Example: "Jerry" is written 5 times. 5 - 2 = 3 (first two do not count). 3 x -0.5 = -1.5. The penalty in this case is -1.5

d) Cards

1. Two persons marking is recommended as the most efficient way.
2. Check the top and the bottom of the deck: competitors can start on either side

e) Numbers

1. Either folding the sheet and marking on your own or in smaller groups can work.
2. The results of the first trial of 5-minute Numbers are needed before the second trial. This has priority over other disciplines.

f) Images
1. A score of 5 is awarded for each correct row.
2. A penalty of -1 is given for each incorrect row. This also applies to the final row.

g) Dates
1. A score of 1 is awarded for each correct date.
2. A penalty of -0.5 applies for each incorrect date.

h) Spoken Numbers
1. The raw scores of the prior trial need to be known before the next trial; therefore marking has priority over other disciplines.
2. After the first mistake, no further checking for mistakes is needed.

i) Speed Cards
1. After card deck submission, arbiters check all decks for propriety. If the decks are not properly labelled, arbiters undertake to clearly label the decks.
2. The recall decks should be brought into order by arbiters (if they are not in order already)
3. Cards are distributed right before each trial and the deck for memorization is shuffled again before the trial.
4. Arbiters make sure that each competitor has two decks of cards (one for memorization and one for recall) on their desk before starting a trial.
5. During memorization, Arbiters stand where they do not distract the competitors but can still clearly see them.
6. During recall, Arbiters make sure that the memorized deck is not touched by the competitors.
7. After recall is finished, the arbiter and the competitor take one deck each and check if both decks are in the same order by flipping the cards simultaneously. Competitor can tell on which side of the deck (bottom or top) it should be started. If both decks are in the same order, time is written down on the recall slip. If they are not in the same order, the number of cards up to the first mistake are written down.
8. Results of all other disciplines have to be published (including total scores) before this discipline can start. The same applies for the results of the first trial of this event before the second trial can start. This rule is of utmost importance. Organizers and arbiters are advised to plan venue availability accordingly, also taking into account potential delays, so that the tournament can comply with this rule.

6) Guidelines for Competitors

a) Before the competition

1. Please check the schedule and contact the organizer if there is any doubt with regards to the competition
2. Competitors are required to hand in all the cards that they want to use for Speed Cards / longer Card events at the time of registration or prior to the commencement as specified before by the organizer.
3. Please make sure that everything you hand in is clearly labelled with your name and ideally also your IAM ID. You may mark the deck of cards in the order you would like to receive them.
4. Competitors not using a standard deck of international cards must inform organizers beforehand so that the recall sheets can be prepared accordingly.
5. You may bring your own timers. Make sure your timers do not beep or make any other noise.

b) During the competition

1. Be on time! In case the organizer needs to change the schedule, announcements may be made at the competition venue.
2. Before memorization starts, memorization sheets will be handed out
3. As soon as everyone has a memorization sheet, organizer will give one minute of mental preparation time.
   a. To start the mental preparation time, you will hear 'Your one minute of mental preparation time starts now'.
   b. When 10 seconds of mental preparation time are left, you will hear '10 seconds'.
   c. When the mental preparation time is ending, you will hear 'Ready, Set, Go!'.
4. When you hear 'Go', turn your paper and start memorizing.
   a. Turning the paper before the signal is a breach of rules and can lead to penalties or disqualification from the event.
   b. Therefore, please listen closely to the starting signals.
5. Organizer will announce in regular intervals how much memorization time is left.
6. Once you hear "Stop memorizing - turn your papers over" - please turn your paper and sit quietly until an arbiter comes to pick up the memorization sheet.
   a. Writing on your paper after the stop signal is a breach of rules and can lead to penalties or disqualification from the event.
   b. Therefore, please listen closely to the stop signals.
7. If your memorization sheet is not picked up, please raise your hand.
8. Recall sheets will be distributed (or computers started) and after that, recall is started. Recall sheets may be distributed before memorization starts and placed under the desks to increase efficiency for the arbiters. This is encouraged to be done in as many disciplines as possible.
9. If you have handed in your recall papers, you are allowed to leave the hall after the first 5 minutes of recall are over and before the last 5 minutes have begun. Please note that once you have handed in your recall papers, no more changes can be made to the recall sheet. Please also note that once you have handed in your paper and left the competition hall, you may not return until recall is over.
10. You may use the bathroom during recall. An arbiter needs to join you.

c) After the competition

1. Please make sure that you pick up everything that you handed in at registration.
2. Gladly give feedback to the organizing team about any remarks, ideas for improvements or any kind words that you might have.

7) Requests for More Data

a) Binary Digits and Numbers

For Binary Digits and Numbers, further digits can be requested one month in advance.

b) Other disciplines apart from Cards

There is no extra data for Names and Faces, Words, Images, Dates and Spoken Numbers. These disciplines are provided with an amount equal to the current world record plus 20 %. For disciplines where marking is done based on rows/columns such as Words and Images, the amount data is rounded up to complete a row/column.

c) Cards

For the Cards disciplines apart from Speed Cards, the amount a contestant wants to memorize can be freely chosen without a need to communicate this to the organizer within a certain deadline. In paper-based events, competitors are expected to notify the estimated number of decks they will try on the registration form, should the organizer or arbiter of the event request so.

8) Scoring

a) Raw score and 1000-points standard

Scoring works by taking the "raw score" of the competitor (for example: 400 points on 5-minute Numbers) and comparing it with the 1000-points standard for the discipline by this formula:

Discipline	Points
Spoken Numbers	$\sqrt{Digits} \times 47.3$
Speed Cards	Full Deck: $\frac{8030}{Time^{0.75}}$ Partial Deck: $\frac{Cards}{52} \times 111.4$
All Other Disciplines	$\frac{Raw\ Score}{Standard} \times 1000$

b) Adding up of points

The points obtained in each discipline are added to get the total championship points obtained by a competitor.

c) Weblink to points standards

The standards used for each discipline are available on the IAM stats website (iam-stats.org).

d) Standard adjustment rules

If 3 different competitors get a higher score than the current standard, after the current standard was introduced, the standard is updated to 1.1 times the average of these 3 scores. For example, the old standard for images was 373 and was broken with 413, 409 and 395. The average of the 3 scores is 405.66. So the new standard is 405.66 * 1.1 = 446.

1) Exception: If more than one competitor breaks a standard in the same tournament and if that leads to a situation where more than 3 competitors have achieved a better score than the current standard (after its introduction), the standard is updated to 1.1 times the average of all these scores.

2) Standards shall be adjusted as soon as possible after they have been broken for the third time. The standard change becomes effective with its publication on the IAM website, with the given effective date.

9) Competition Formats

a) 4 Formats

Each competition must follow one of the 4 tournament formats: Regional, National, International or World.

b) Exclusivity of World Championship Format

The World format is only permitted at a World Championship.

c) Regional format

Regional is a shortened National standard that consists of only 7 disciplines and lacks the following disciplines compared to National: 10-min Cards, 15-min Numbers, Spoken Numbers.

d) Memorization times for the different formats

Based on the standard, the memorization time for certain disciplines must be according to the table below:

Discipline	National	International	World
Words	5 minutes	15 minutes	15 minutes
Binary Digits	5 minutes	30 minutes	30 minutes
Names and Faces	5 minutes	15 minutes	15 minutes
Cards	10 minutes	30 minutes	60 minutes
Numbers	5 minutes 15 minutes	5 minutes 30 minutes	5 minutes 60 minutes
Images	5 minutes	5 minutes	5 minutes
Dates	5 minutes	5 minutes	5 minutes
Spoken Numbers	No Restriction	No Restriction	No Restriction
Speed Cards	5 minutes	5 minutes	5 minutes