



X2FACTOR

"Pure mathematics is, in its own way, the poetry of logical ideas"

- Albert Einstein

I believe it is the logic of mathematics which makes it more creative than any other academic subject. Mathematics not only reveals a truth but demonstrates why it is so. Everything around us is mathematics. Everything around us is numbers. Brace yourself with the most challenging yet the most interesting event of Misaal: **X2 Factor**.

GENERAL RULES:

- Teams may consist of 3-5 members.
- Participants must bring their own pencils, erasers, calculators and any additional stationery they may require. Sharing calculators or any other equipment is **NOT ALLOWED**.
- Phones will not be allowed during the rounds.
- Any formula sheets or calculators on phones will not be allowed.
- Negative marking is only effective in Rounds 3 and 4.
- Calculators may be used in any part of the event.
- Cheating or attempting to cheat or gaining advantage by unfair means will result in penalty or elimination.
- The decision of the management will be final. Any arguments over set rules and regulations will not be entertained.
- Concerns over authenticity of any question may be communicated to the management after the end of the round.
- Detailed instructions will be provided before the start of each round.
- Marking for each round will be done separately. Marks will be scaled accordingly to formulate a combined score in order to determine a winner.

Day 1

ROUND 1: MCQ ROUND.

An answer sheet will be provided to each team. A certain number of questions will be projected on a screen for a span of time ranging between 20 seconds to 2 minutes. Participants will have to fill in one of the 4 options on their respective answer sheets. Each question carries 5 points. Leaving an answer space blank or double marking/overwriting will be considered as a wrong answer. There is **no** negative marking. Calculators are allowed although their use is not recommended in every question.

ROUND 2: Mathematical Puzzle Solving.

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Each team will be provided 3-5 distinct mathematical puzzles (e.g. Sudoku or Ken-Ken). Participants will be provided with rules and instructions and given time to study them before the round begins. Participants will have to solve the puzzles in the allocated time. Marking will be done on a scaled basis and higher marks will be awarded for a higher extent of correct solution (in cases of incomplete solution).

ROUND 3: RAPID FIRE.

Each team will be provided with a time frame of 2 minutes in which they have to answer as many questions as they can. The questions will be short and logical, requiring quick thinking skills and little to no calculation. Calculators are **not** recommended. The questions may require participants to choose from the given options or to generate their own answers. **WRONG ANSWERS WILL BE PENALISED.** Each correct answer will score 5 points whereas each wrong answer will result in -2. Participants can skip up to a maximum of 3 questions after which their round will automatically end.

Note: Teams will qualify for Day 2 based on their collective score in all 3 rounds. Eliminated teams will not be allowed to compete further.

DAY 2

ROUND 4: BUZZER ROUND.

Each team will be provided with an electronic buzzer. Questions will be projected on a screen and teams will be required to solve them. There will be no time limit for any question. The time for a question will end when a team will ring their buzzer. After a buzzer is rung the team will have 3 seconds to verbally dictate their answer. **WRONG ANSWERS WILL BE PENALISED.** Each correct answer will score 10 points whereas each wrong answer will result in -5 points. Accidentally pressing the buzzer or failure to provide an answer after pressing the buzzer will be considered as a wrong answer.

ROUND 5: CALCULATION ROUND.

Each team will be given an identical question booklet containing 5-8 questions that require extensive logical and mathematical solutions. The teams will be given fixed time duration to solve the complete booklet. Teams will have to solve the questions in an orderly manner with properly worked out solutions that represent their thought pattern. They will be marked on the accuracy of their approach as much as the accuracy of their final answers. Sketches or diagrams may be used to work out solutions. Neatness of work is important. Illegible working will not be marked.

EVENT HEAD KHIZER AHSAN