



MESA DAY CONTEST RULES

2021-2022

(DRAFT)

Math Escape Challenge (Virtual)

LEVEL:	Middle School (MS) & High School (HS)
DIVISION(S):	Grades 6-8 (combined) and Grades 9-12 (combined)
COMPOSITION OF TEAM:	2-3 Students per team
NUMBER OF TEAMS:	Preliminary – Determined by your local MESA center Regional – Two teams per division per MESA center (please check with your MESA center to confirm the number of teams advancing)
SPONSOR:	University of the Pacific MESA College Prep Cal State LA MESA College Prep

OVERVIEW: Students will work in teams of two to three to solve challenging performance and/or problem-based real-world challenges using general mathematics skills and techniques. Through collaboration, teams will solve a series of non-routine problems requiring creative deductive and reasoning skills to “escape” the quickest. **Participation logistics and limits may vary by host site. Advisors and students are responsible for verifying this information with their local MESA center. This competition will be virtual for 2021-2022.**

MATERIALS: The Host Center will provide the following:

- A Zoom meeting invitation
- A series of questions will be given to each team via the Brain Chase platform

There are no restrictions on tools (calculators, scratch paper, etc.)

Scratch Paper:

- For **preliminary events**, centers may require students to submit their scratch paper at the end of the competition - check with your MESA center if this is a requirement.
- For **regional events**, scratch paper **will** be collected immediately at the end of the competition - students who do not submit scratch paper cannot place.

- Host Centers - for collecting scratch paper you can use resources such as Wufoo Forms, Google Forms, e-mail submission, etc. Students can take a photo of their scratch paper to submit.
 - Each student on the team must turn in their scratch paper.
 - The student's name, grade level, school, and MESA center should be written on their paper.

GENERAL RULES:

- 1) Teams must consist of 2-3 students.
- 2) There is no restriction on the composition of a team; teams may consist of students from any grade or math level.
- 3) All team members must login to the Zoom meeting 15 to 20 minutes prior to the competition start time so that proctors can put them in their break-out rooms and a quick overview of the competition can be given.
- 4) Each team member's name, school name, and MESA Center (for Regionals only) must be listed as the login name for Zoom to be placed in the appropriate break-out room.
 - a) There are only 15 characters available for your Zoom name
 - i) For Preliminaries, names should look like: School Name_Team Member Name
 - ii) For Regionals, names should look like: MESA Center_Team Member Name
- 5) Teams will be allowed 1 ½ hours to solve the challenge and “escape.”
- 6) The problem set may be one question or a series of connected and dependent questions.

TECHNICAL:

- 1) Teams will designate a “Team Leader” who will be given the login information and access to the Brain Chase platform at the start of the competition. The **designated team leader** will need to:
 - a) Log in to the Brain Chase platform on behalf of the team - **only** the team leader must log in
 - b) In Zoom, share screen with their teammates during the competition once put in their breakout room, and share for the duration of the competition until they complete the challenge
 - c) Input the answers into the Brain Chase platform
 - d) **Note** that the student who takes on the role of Team Leader should have a stable internet connection.
- 2) All team members should make sure that they have access to Zoom prior to the competition, including the ability to be moved into breakout rooms and participate in Host Center Zoom invitations. **Note** that students may need to use a personal email address if there are restrictions on their school accounts. If you need to create a Zoom account, you can take a look at this “how-to” video: <https://www.youtube.com/watch?v=qsy2Ph6kSf8>.
- 3) In the event that the Team Leader is dropped from the Zoom meeting, the remaining team members need to alert the judges by using the “Ask for Help” button on the bottom of the Zoom screen. The Team Leader should attempt to return to the competition as quickly as possible. In the interim, another team member will be designated as the alternate Team Leader and will be assisted with logging into the platform.

JUDGING:

- 1) The lead contest judge will assemble all participants and review the event guidelines and judging criteria, prior to opening up breakout rooms for teams. Students and teachers can review competition logistics here: <https://tinyurl.com/MDMath22>
- 2) Per General Rule # 4, each team will ensure that their Zoom login name has each of the team member's name, school name, and MESA Center (for Regionals only).
- 3) Teams need to click on each "Challenge Icon" to solve a math problem and team members should write down their answers because they will need them for the final Escape Room challenge.
- 4) To successfully complete the competition, teams must complete the math problems and break out of the virtual Escape Room.
- 5) All answers are time stamped, so in the event of a tie, judges will rank teams based on the fastest solution times.
- 6) Note again, the Host Center may require scratch paper that "shows your work" to be submitted at the end of the competition. Check with your local MESA center to see if this is a requirement. Regional events **will** require the submission of scratch paper.

SCORING:

- 1) Winning teams will be determined by the following:
 - a. "Escaped" in the fastest time.
 - b. If no teams "escape," winners will be determined by the highest number of problems completed in the allotted time. Note that every problem is time-stamped in the Brain Chase Platform to help determine the winning teams.

AWARDS:

- Medals will be awarded for 1st, 2nd, and 3rd place.
- Please check with your MESA center to determine the number of teams that advance to Regional MESA Day.

ATTACHMENTS:

- Overview of the Brain Chase Platform
- Math Concepts Resource

Overview of the Brain Chase Platform

An overview will also be presented at the start of the Math Escape Room competition, but students are encouraged to familiarize themselves with the platform beforehand. Please see link below:

- <https://tinyurl.com/MDMath22>

Math Concepts Resource

The following map concepts can be used in any variation in the challenges:

- Geometric shapes
- Two- and three-dimensional figures
- Surface area and circumference
- Probability
- Rational and irrational numbers
- Equations and inequalities
- Fractions and percentages

The resource folder can be found by clicking below:

- <https://bit.ly/2WBNKZj>

Resources include demo challenges and sample problems.