



The Game:

Moto Math, a robotics competition for students in 6th grade and younger, is played on the field shown above which is approximately 4' x 12'. Alliances, made up of two randomly paired teams, collaborate to score as many points as possible. Matches are 1:30 (one minute and thirty seconds) in length. The controller of the robot must be passed from one driver to the other between thirty (30) and sixty (60) seconds within a match.

The object of the competition is to attain a higher combined score than all the other teams. Points are scored by knocking down the Fibonacci Flags (red cups), completing laps around the multi-colored race track, placing the Fraction Spheres (4 balls) on the green tiles, pushing the Probability Cube out of the race track and parking on the same colored tiles at the end of the match.

The Details:

There are a total of ten (10) Fibonacci Flags with each scored (knocked over) flag increasing the score in classic Fibonacci order, 0,1,1,2,3,5,8,13,21,34). The four (4) Fraction Spheres are scored by moving them from the red tiles to the green tiles. The more you

score the more points you get in the following sequence: 5,10,20,40. Points can be gained exponentially by completing laps. Up to 5 laps will earn points in the following order: 2, 4, 8, 16, 32. Then the Probability Cube can be scored by the second driver by pushing it out of the race track. The points scored will be the number displayed on the side on top. The score can be, 5, 10 or 20. The final method of scoring is the Percentage Parking Bonus. By parking the robots on different tiles of the same color 5, 10 or even 20 points can be earned. Robots are placed on the either side of the finish line to start the match.

Each robot (no larger than 14" x 14" x 14" to start) will collaborate within its Alliance in order to maximize its score. The breakdown of the scoring can be seen below.

Scoring

Object	Goal	Max Score
Fibonacci Flags(red cups)	Knocked over	34
Fraction Spheres	Placed on Green Tiles	40
Laps	Complete One	32
Probability Cube	Pushed Out of Field	20
Percentage Parking	Park on different tiles of same color	20