



High Stakes **Tournament** **Structure & Game** **Strategies**

Boost Robotics

Agenda

Tournament Structure

Tournament Skills

Game Strategies

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Tournament Structure

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Typical Schedule

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Tournaments typically run from **8am-6pm**

- **Check-In**

- Robot Inspection

- **Qualification Matches, Skills Challenge, Judges Interview**

- Skills challenge & judges interviews between qualifications

- **Alliance Selection**

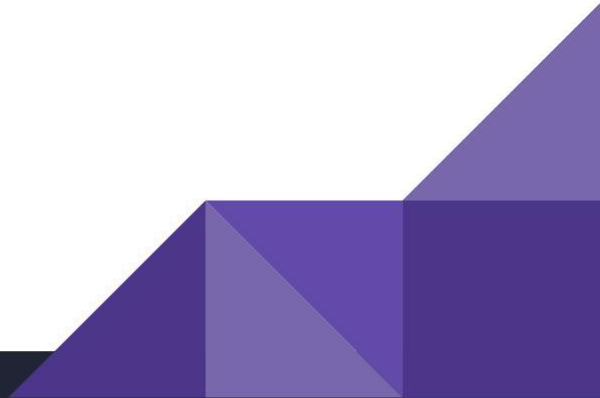
- Top 8 or 16 teams pick teams
- Alliances go into eliminations

- **Elimination Matches**

- Best of One matches
- If you lose, you're out

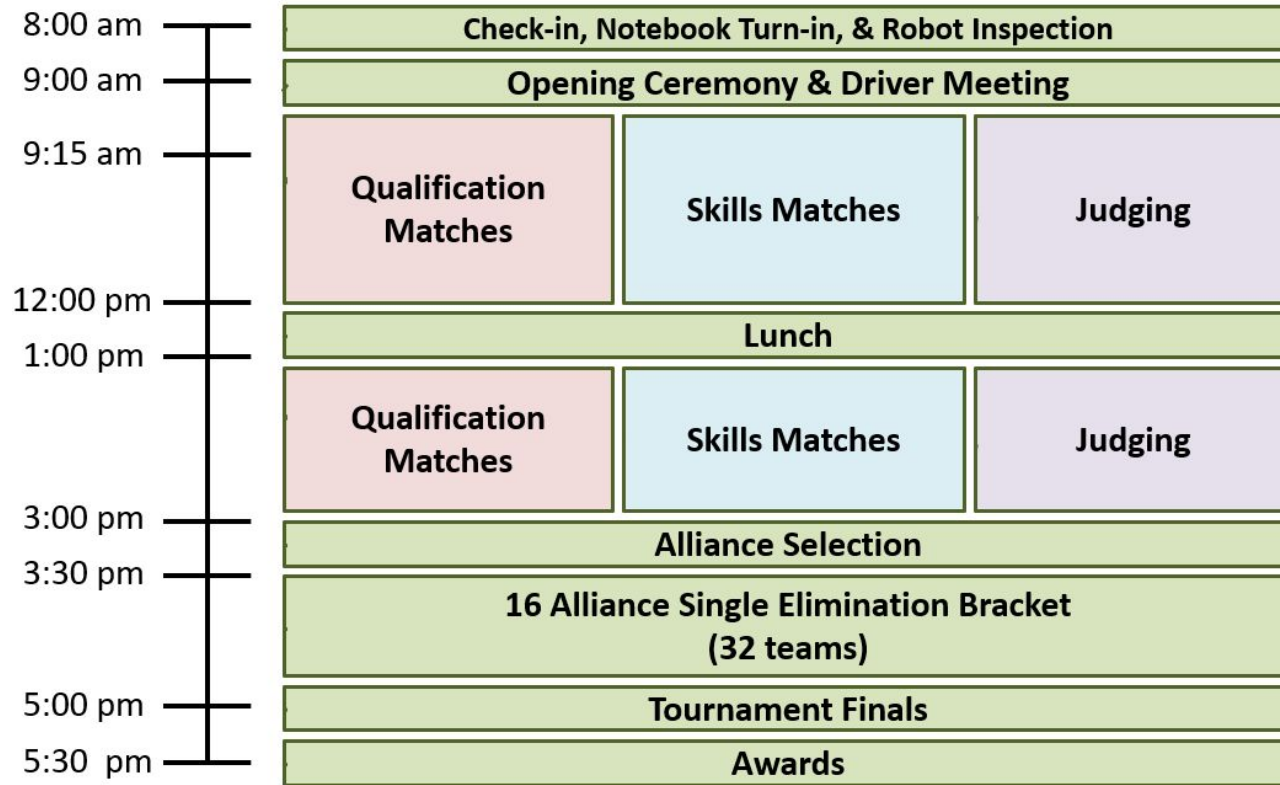
- **Award Ceremonies**

- Even if you don't win, you can get an award!



Typical Schedule

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Match Overview

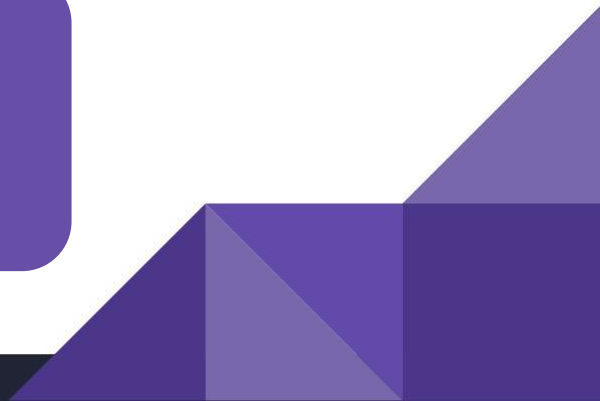
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0:15

Autonomous

1:45

Driver Control

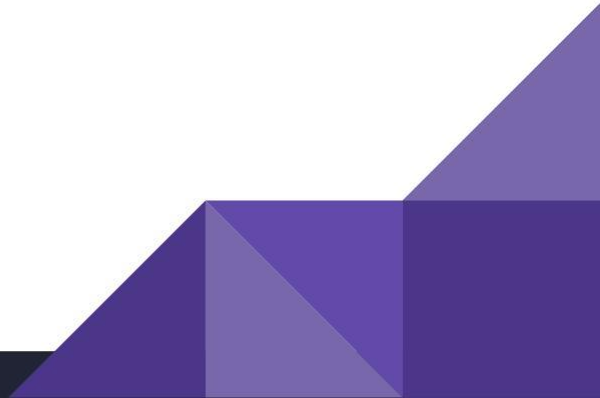


Qualification Matches

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The qualification matches run after the drivers meeting:

- 6-10 Qualification Matches depending on the event
- Paired with and against random teams
- Qualification Matches determine your ranking
 - Auton Win Points + Match Win Points
 - Win Points add up → goal is to get as many win points as possible
- Between Qualification Matches
 - Judges interview
 - Skills runs
 - Repairs on the robot



Rankings after Quals

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During qualifications you will be paired with random partners.

Qualification Matches
Random opponents and alliances

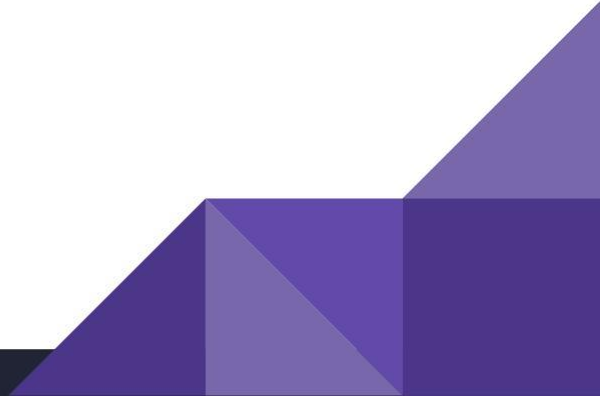
Alliance Selection &
Elimination Matches
(Playoffs)

Alliance Selection

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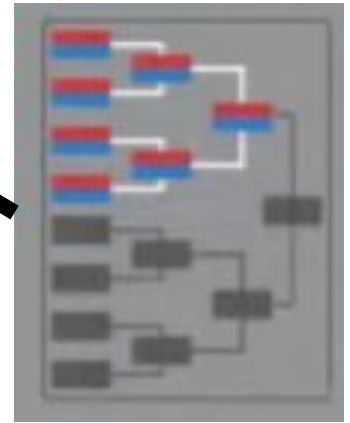
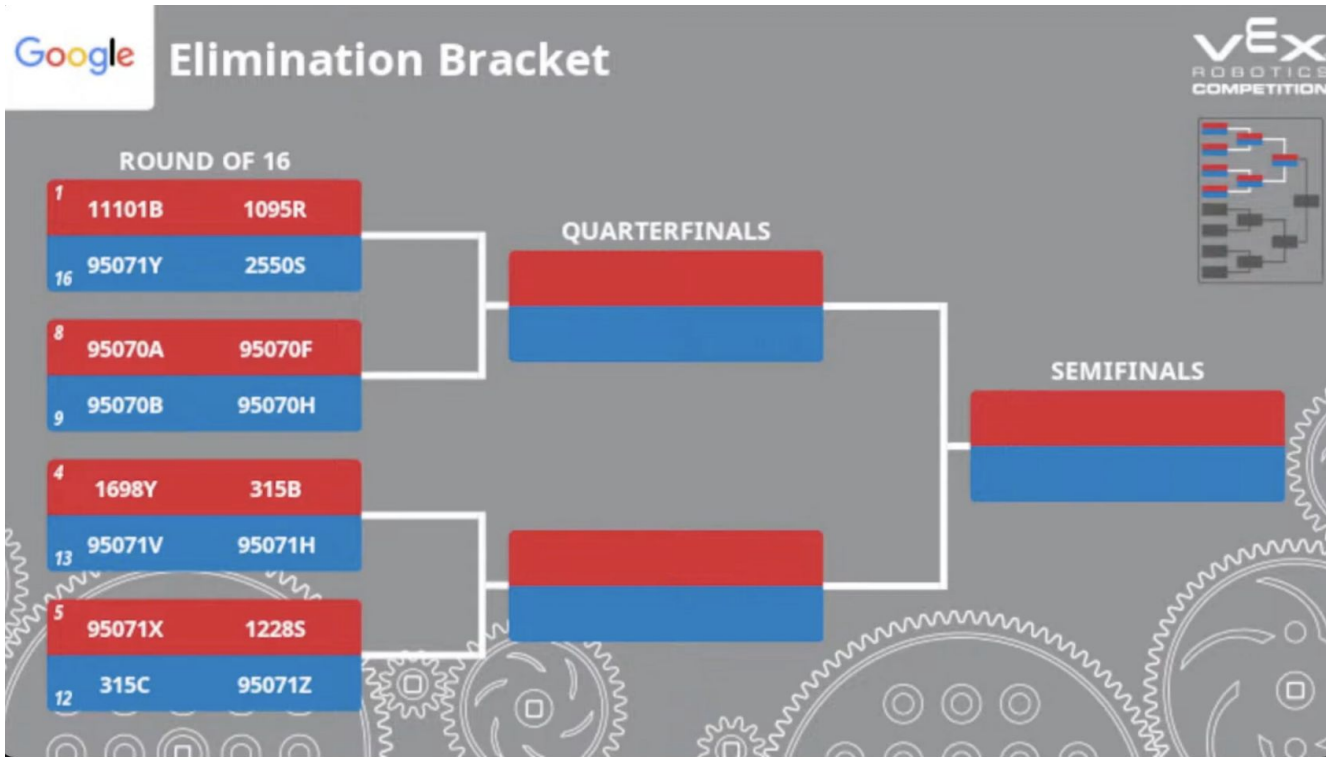
Teams ranked based on winpoints

- First rank selects any team
 - Team can choose to accept or decline
 - If they accept, the first seed alliance is made
 - If they decline, they can only choose a team below them
 - First rank can choose again, process repeats
- Continues down to next rank
 - Earlier process repeats
- Finishes at 8 or 16 alliances
 - Depends on size of tournament



Elimination Structure

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Tournament Tips

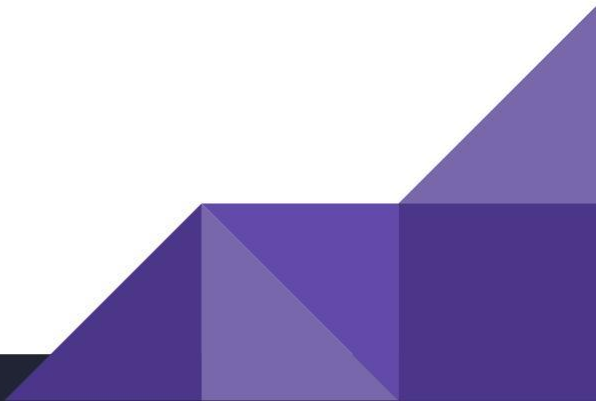
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Checklists for Tournaments Boost Robotics

- **Robot**

- Size check (18x18x18)
- Check Robot between competition rounds (loose screws, axles in motor etc)

- **Parts and Tools**

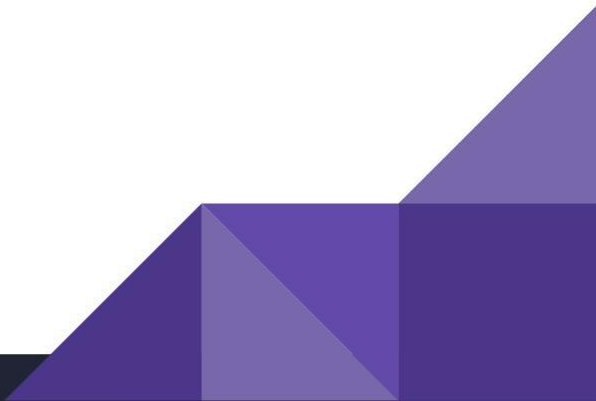
- Keep spare batteries (at least 1 battery)
 - Carry spare parts and tools to matches
 - Charge joystick
- 

Checklists for Tournaments Boost Robotics

- **Matches**

- Pay attention to match schedule (you will miss the match if you are late)
- Participate in skills
- Get the **VEX Via App** for [IOS](#) or [Android](#)

- **Strategy**

- Read the game rules
 - Understand capabilities of each team
 - Formulate strategy for each match
 - Analyze after each match and tournament
 - Capture learnings in notebook
- 

At the Tournament

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- **Roles**

- Designate roles for each team member
 - Driver, Navigator, Strategy, Scouting, etc
- Practice Practice Practice

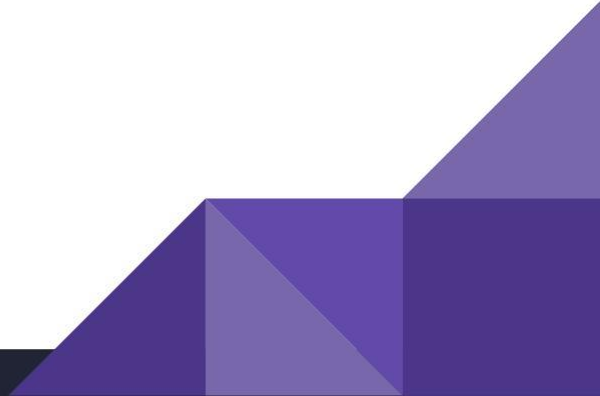
- **Matches**

- 3 members per drive team
- Calculate and verify scores at the end of a match
- Lodge any disputes with referee immediately after the match
 - Only students can talk to referees
- No match replay videos are accepted



- **Awards**

- Submit notebook to be eligible for all judged awards
- Make sure to be interviewed by judges ([Judging Guide](#))
 - They come to pits or you go to a judging room depending on tournament
 - Seek out judges if you've been busy
- Read through the judging rubric for awards



Scouting

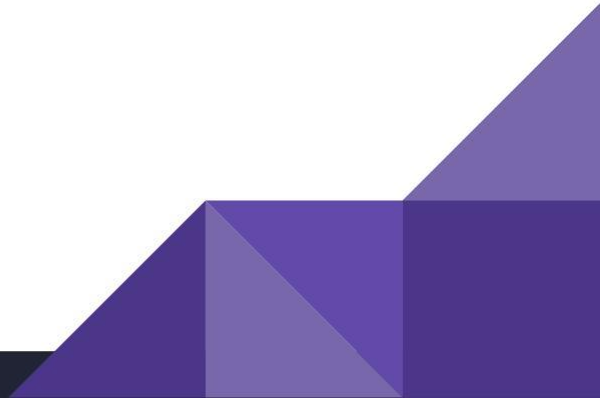
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- **Capture scouting on Spreadsheet**

- Opponents
- Partners
- Watch preliminary and practice matches
 - Categorize teams by: good teams and average teams

- **Capabilities of each team**

- Autonomous - various options
 - WP potential as a team
- Intaking of rings
- Scoring of rings
- Climb
- Consistency of robot
- Driving capability of team



Scouting Example

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<p>Q4 alliance 5327C</p> <p>auton: roller, missed high goal?</p> <ul style="list-style-type: none">- accurate triple shot- no expansion- can do rollers fine	<p>opponent 254W</p> <p>auton: really accurate 2 high goal shots</p> <ul style="list-style-type: none">- accurate shots in general- did 2 rollers first- got full goal w/ S- I think they have expan? didn't shoot it
<p>Q5 opponent 8000A</p> <p>auton: no auton?</p> <ul style="list-style-type: none">- makes like 50% of discs- really slow x drive- can shoot long + short dist- 1 ok expansion, half-field	<p>Q6 opponent 5327K</p> <p>auton: missed catapult & roller</p> <ul style="list-style-type: none">- makes close-up cata shots pretty much 100%- intake is a little janky w/delay- a little slow- 1 long expansion- they have some vertical expansion thing idk what it is

Scouting Example

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Match 9 - Qualification #153 - Tesla

Teammate:

952B - RMS Robotics

Opponents:

92305A - VEXation

6m drive, meta-bot, pneumatic locking clamps (front/back), four-bar.

Park with three goals, consistent double parking.

130 driver skills, 4 different autons.

"Lockdrive" and 90% ring accuracy.

Neutral goal miss win point miss in Practice match (Right side). Fast robot

On the Field

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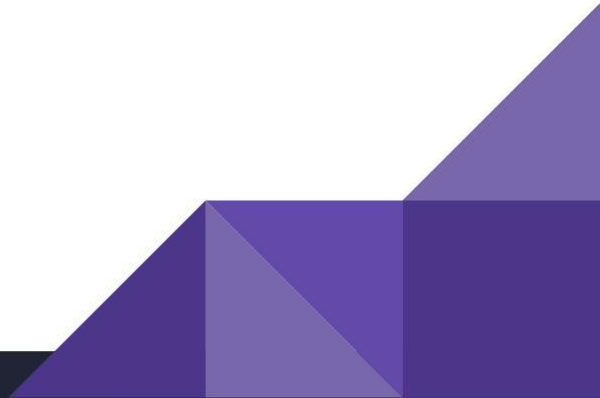
Most important: don't forget anything when setting up for game.

Starting Robot:

- Alignment of robot
- Motors plugged in
- **Start with Intake up attached to hooks**

Field Control:

- Controller plugged into field control
- Program started (with "Run" not "Timed Run")





Tournament Skills

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Tournament vs. Skills

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Tournament:

- Two versus two
- Red and blue alliance
- Try to score more points than other alliance

VS.

Skills:


- Solo
- Playing on red alliance
- Try to score as many points as possible in a limited time



Skills

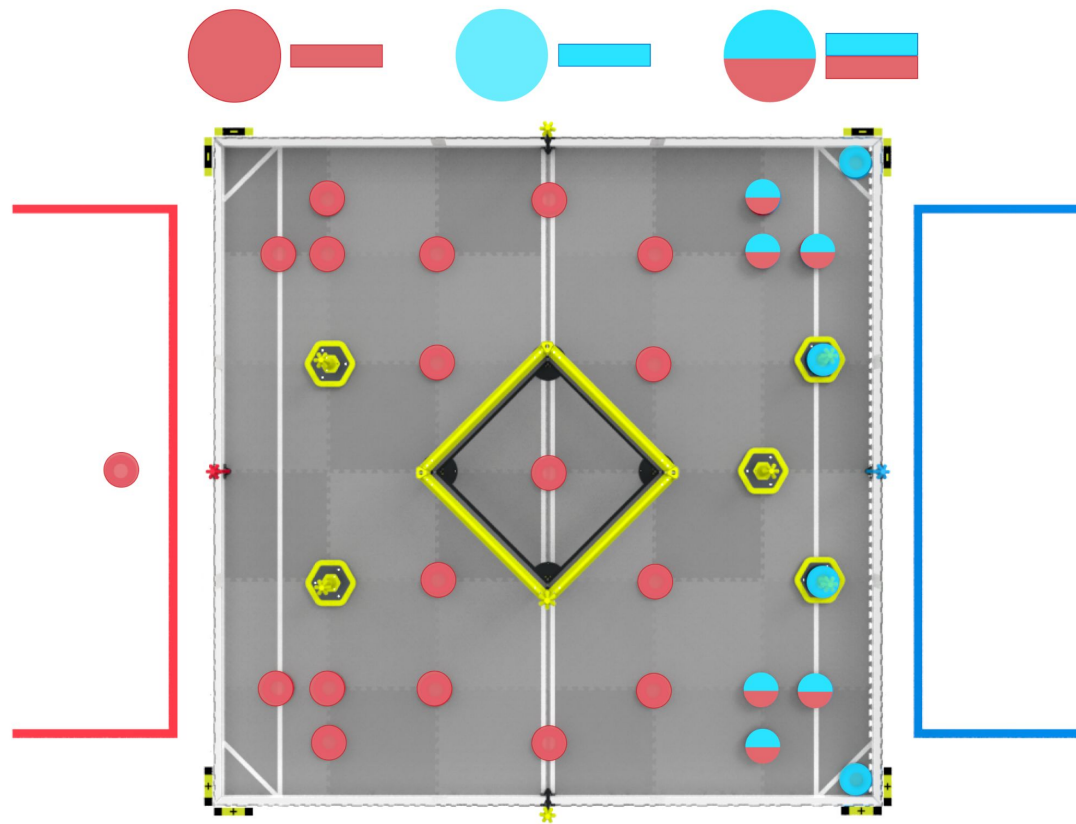
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Skills is a mini-competition where you try to score as many points as possible.

- Either driver control or autonomous
 - 3 one-minute runs of each mode (driver & auton) per competition
 - Start anywhere on the red starting line with a red preload
 - Try to score the **24** red rings
 - Only score blue rings **after** scoring all the red rings
 - Red rings cannot be scored **above** blue rings
- 

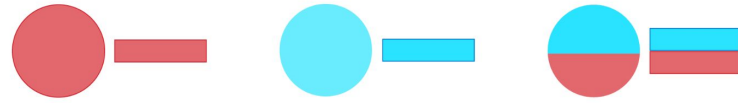
Field Setup

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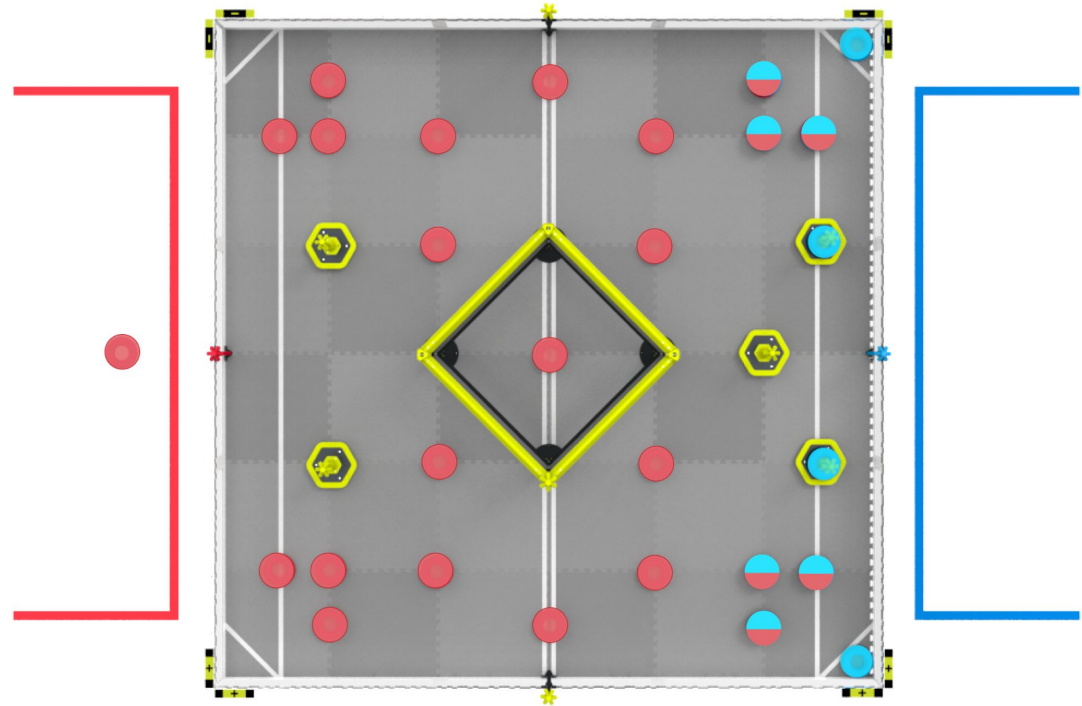


Mobile Goals

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What do you notice about some of the mobile goals?



Benefits

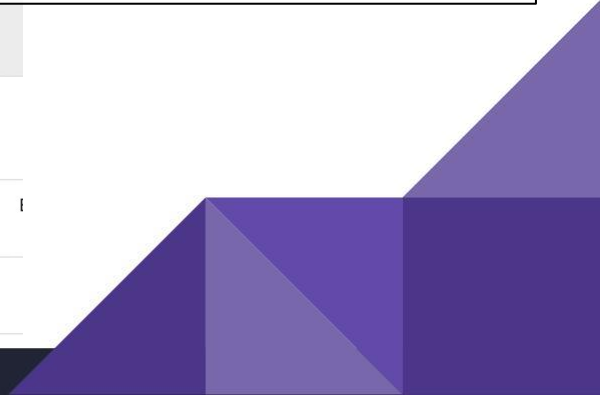
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Highest combined skills score (driver + auton) receives the **skills champion** award.

You can qualify for **states** and **worlds** if you get a high enough skills score!

Row	Rank	Score	Autonomous Coding Skills	Driver Skills	Highest Autonomous Coding Skills	Highest Driver Skills	Highest Autonomous Score Timestamp	Highest Driver Score Timestamp	Highest Autonomous Score Stop Time	Highest Driver Score Stop Time	Team Number
1	1	113	54	59	54	59	2024-09-20 22:11:46	2024-09-20 21:32:34	0	0	6099A
2	2	109	53	56	53	61	2024-08-16 08:21:43	2024-10-18 08:17:04	0	1	81988E
3	3	102	50	52	50	52	2024-10-13 21:16:40	2024-10-13 17:47:41	0	0	11101B
4	4	100	50	50	50	50	2024-10-15 23:38:10	2024-10-15 23:15:04	0	0	2654E

View live skills standings at [RobotEvents Worlds Skills Standings](#)



Example



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Team **11101B**

50 autonomous

52 driver (not shown)

102 overall

[Video Link](#)



Game Strategies

(ong this is where it gets fun trust)

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Game Strategies

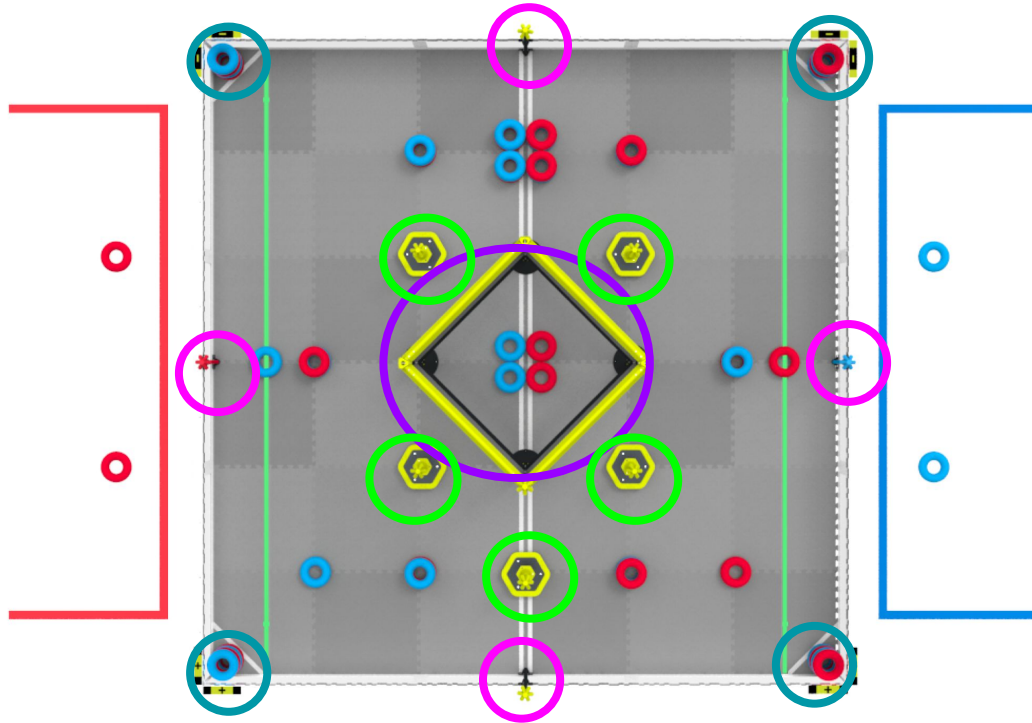
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Let's remind ourselves about the **Game Rules**



REVIEW: Field Overview

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	Red Alliance Ring
	Blue Alliance Ring
	Mobile Goals
	Wall Stakes
	Ladder
	Zones

REVIEW: # of rings can you fit on a stake

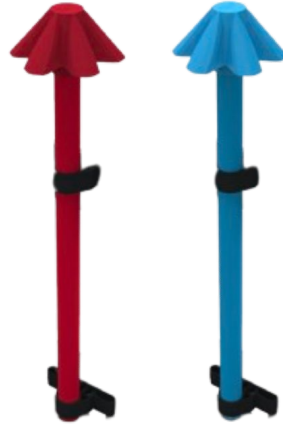
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Mobile Goal

Max Rings: 6

Max Points: 8



Alliance Stakes

Max Rings: 2

Max Points: 4



Neutral Stakes

Max Rings: 6

Max Points: 8



High Stake

Max Rings: 1

Max Points: 3

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Let's begin. Raise your hand if you want to win.

If not, you're still gonna know how to real soon.

YOU




Game Strategies

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There are three main things that you need to do to win a High stakes match

- **Take control of positive corners**
- **Take control of three goals**
- **Have as many top rings as you can**

(You don't always have to do all three of these, they are listed in priority order)



Game Strategies

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Game Strategies

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What do you notice about how the robots play at the beginning of this match?

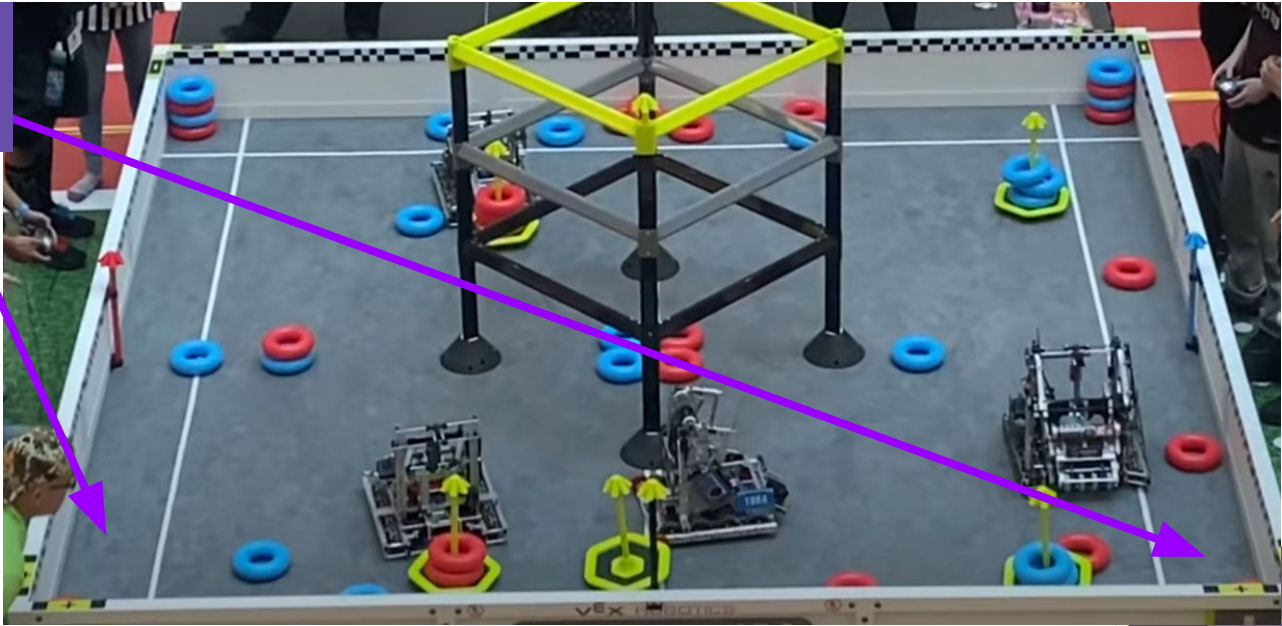


Game Strategies

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Let's break down this clip

Positive corners



Game Strategies

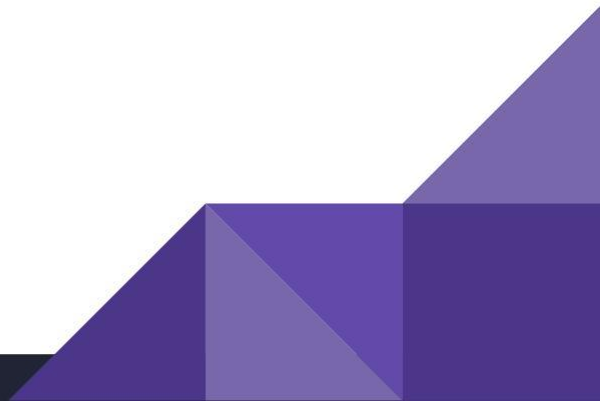
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Let's break down this clip

Both + corners occupied within the first 15 seconds



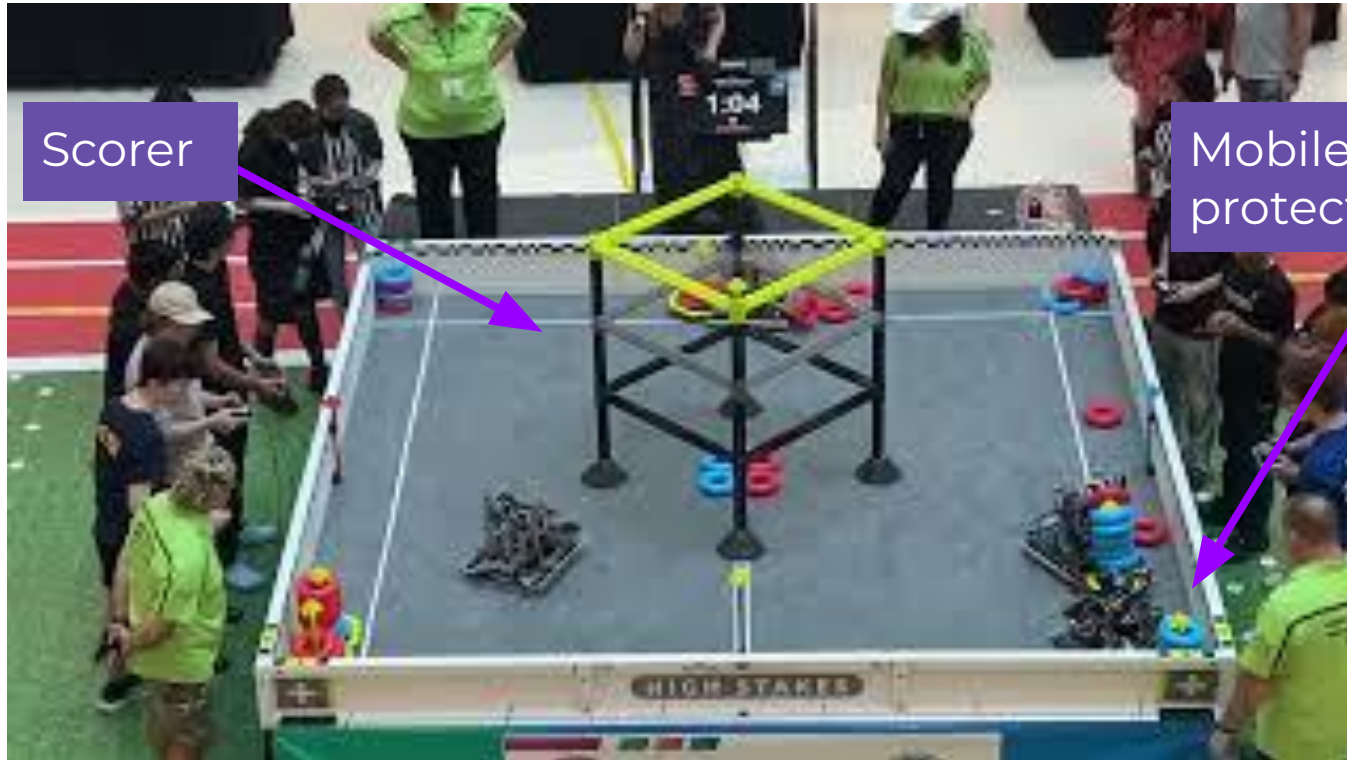
After the autonomous period ends, why do both alliances rush immediately to the positive corners?



Game Strategies

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Let's break down this clip



Game Strategies

Fifth goal turning point

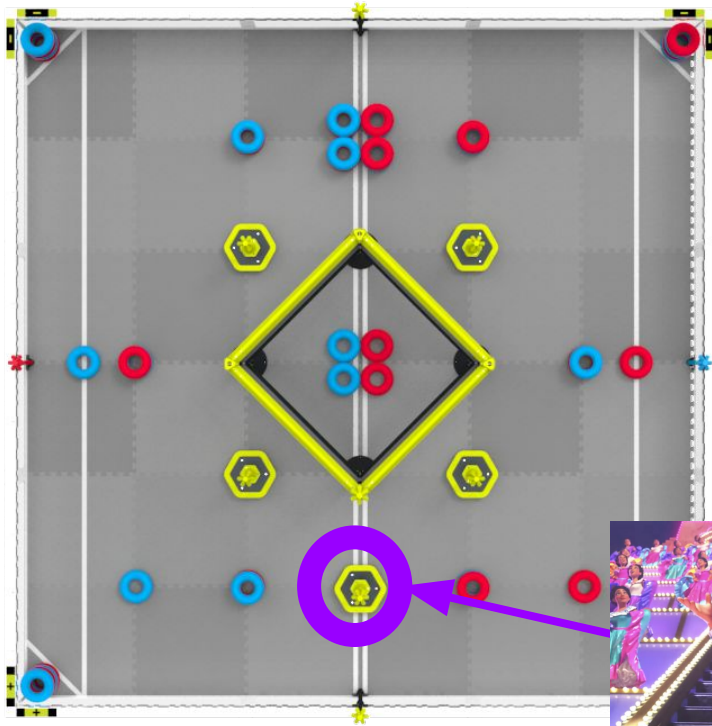
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REMEMBER: THERE ARE 5 GOALS



The fifth goal can, and often will swing a match

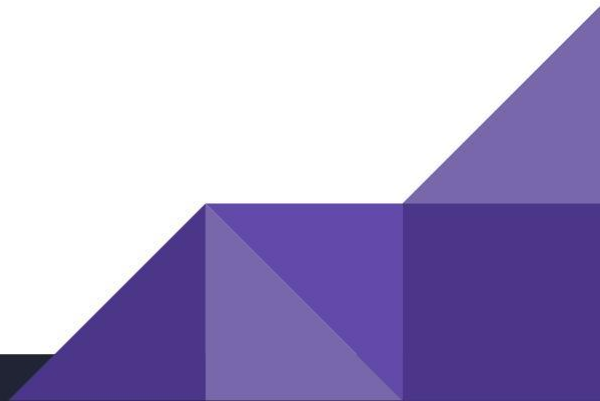
Not only must you get it and score your rings on it

You must keep it in a safe place (just two robots have to control 3 mobile stakes)



Top Rings:

What are all 8 possible top rings that can be scored in a High stakes match?



Game Strategies

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Top Rings:

What are all 8 possible top rings that can be scored in a High stakes match?



Game Strategies

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Top Rings:

Which aren't practical to score on for pretty much any robot?



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Top Rings:

Which aren't practical to score on for pretty much any robot?

(This just means it shouldn't be prioritized; if you see an opportunity that doesn't sacrifice your own mobile goals, TAKE IT.)

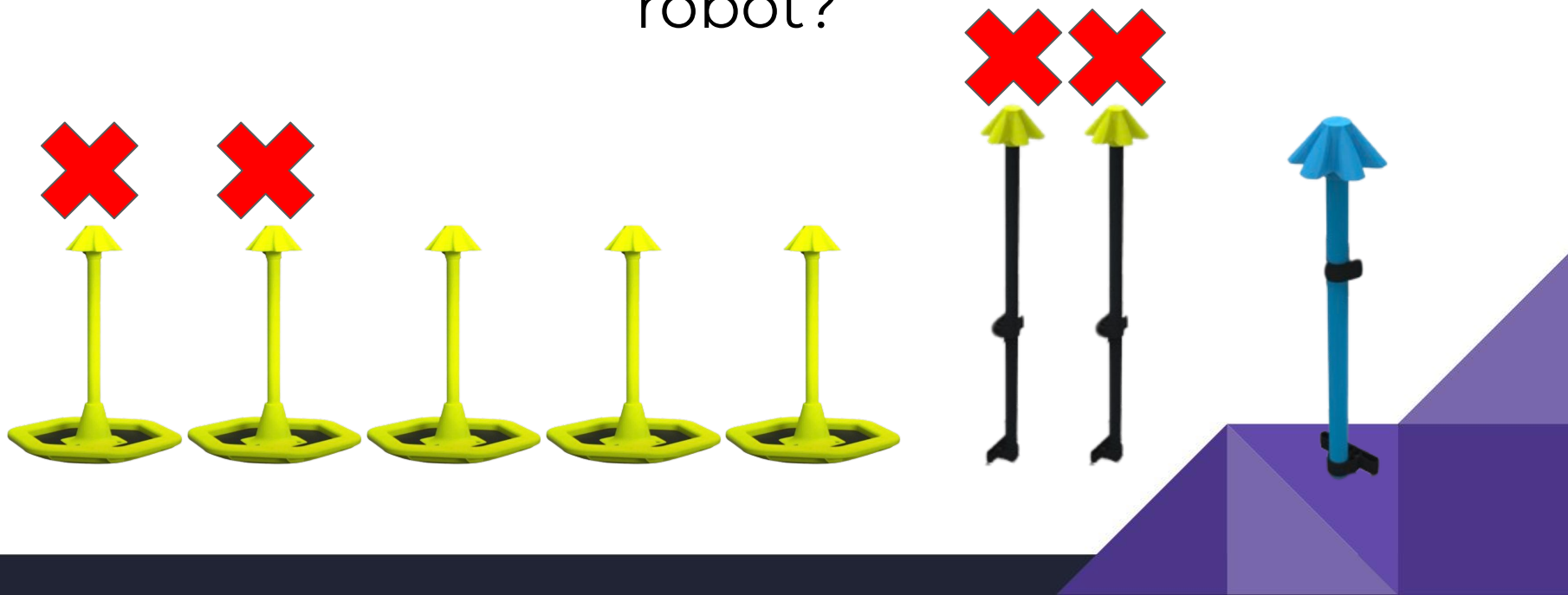


Game Strategies

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Top Rings:

Which aren't practical to score on for the boost robot?



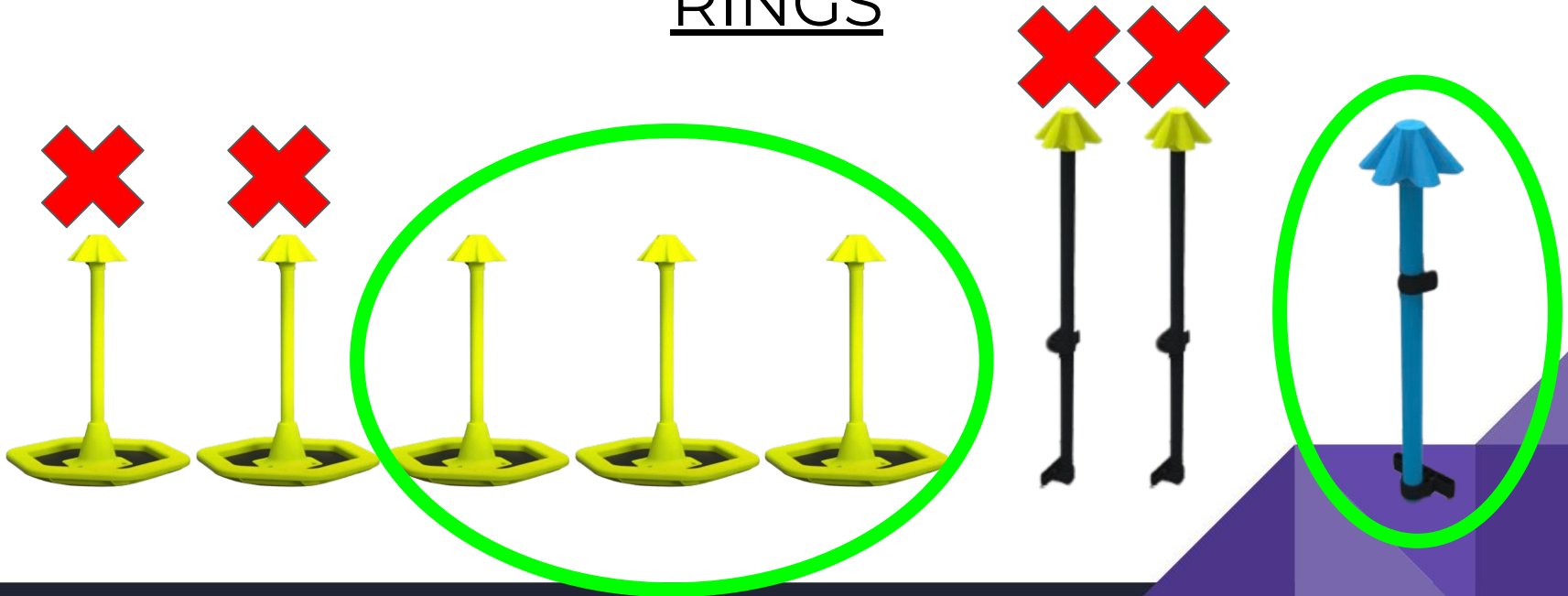
Game Strategies

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Top Rings:

PRIORITIZE 3 MOBILE AND ALLIANCE STAKE TOP

RINGS

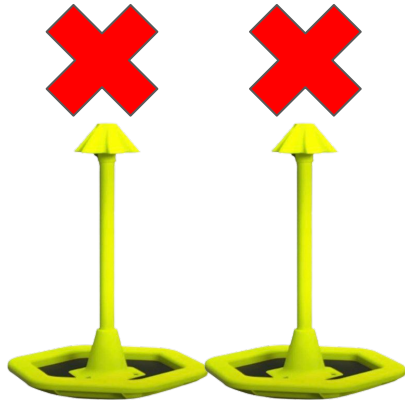


Game Strategies

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Top Rings:

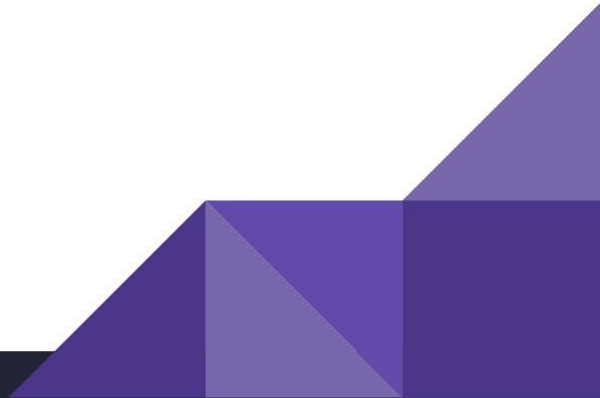
However, you can still prevent the other team from
scoring on these:



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DEFENSIVE STRATEGY: Mobile Goals



DEFENSIVE STRATEGY: Wall Stakes






Reminders

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Reminders

- **DO NOT** move a goal while possessing another goal
 - **DO NOT** contact a goal or rings in the positive corner in the last 15 seconds
 - **DO NOT** hover over or touch anything inside of the field during the match
 - **DO NOT** contact robots that are trying to climb or are climbed already
 - **Keep your controller connected to the field at all times during the match**
 - **Use the "Run" button (not Timed Run)**
- 



Questions?

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Okay done now go win.

