

Module 7 Guided Activity: Scoring Analysis

How can you conduct a scoring analysis to identify a design strategy for your team's *FIRST*® Robotics Competition robot? Utilize this guided activity to identify robot actions, explore the different ways a robot can score points and Ranking Points (RP), and determine what your team's robot Must Do, Could Do, and Won't Do. List all important robot actions even if they don't lead directly to scoring points. Be realistic about your team's capabilities as you discuss and make decisions. Make sure to reference the **Game Details scoring table** and **Tournament sorting criteria** in the Game Manual.

AUTONOMOUS Scoring Analysis:

Robot Action	Point Value	Required for Ranking Point?	# of Scoring Elements Scored per Cycle	Cycle Time Required (Sec.)	Estimated Points per Match	Difficulty Level	Must Do, Could Do, or Won't Do
		Yes No					
		Yes No					
		Yes No					
		Yes No					
		Yes No					

TELEOPERATED Scoring Analysis:

Robot Action	Point Value	Required for Ranking Point?	# of Scoring Elements Scored per Cycle	Cycle Time Required (Sec.)	Estimated Points per Match	Difficulty Level	Must Do, Could Do, or Won't Do
		Yes No					
		Yes No					
		Yes No					
		Yes No					
		Yes No					
		Yes No					
		Yes No					
		Yes No					
		Yes No					
		Yes No					

END GAME Scoring Analysis:

Robot Action	Point Value	Point Value Needed for Ranking Point	What Must Alliance Members Do to Earn a Ranking Point if Your Robot Takes This Action?	Time Required to Complete (Sec.)	Difficulty Level	Must Do, Could Do, or Won't Do

Questions for Further Discussion:

Team Questions:

- Can we build it? Is this robot action within the capabilities of our team?
- Should we build it? Does this robot action align with our team and season goals?
- Do we want to build it? Is there strong agreement within the team about this action/decision?
- Do we have the resources? Does the team have the time, materials, and expertise to finish early enough for testing and practice?
- Is there an opportunity cost? Does pursuing a particular robot action mean that we might have to sacrifice other actions?

General Questions:

- What are some common robot roles, strategies, and overall design approaches for this game?
- What might a robot capable of winning a regional or district event be able to do?
- What will an Einstein robot (at final matches of Championships) be able to do?