



Junior Robotics Competition 2018 Creative Performance Score Sheet



Creative Performance Score Sheet

Category	Examples of how high marks may be achieved are:	Mark
Entertainment value	<ul style="list-style-type: none"> • Non-repetitive robot movements and/or a varied robot performance • There is a common theme demonstrated by the whole performance • A digital display that integrates and/or complements the performance • A performance that is engaging throughout • Ambitious use of the performance area • Robot movement(s) are choreographed tightly to the music • Props or scenery contribute to the overall entertainment value 	/8
Innovation & Originality	<ul style="list-style-type: none"> • Robots are home-built, not kits • Technologies are used in new or different ways not seen before • Unusual technologies are used – for example unusual mechanical, electronic or power systems 	/8
Quality of Display	<ul style="list-style-type: none"> • Reliable robots that do not fall apart and work as expected for the duration of the performance • Home-built robot costumes complement the performance/are engaging • A slick and polished performance throughout the display 	/8
Technical Complexity	<ul style="list-style-type: none"> • Robot movement around the whole performance area • Synchronization and/or communication between robots • Risky movements by robots • Interaction between digital display and the robots 	/8
Sensor & Interactions	<ul style="list-style-type: none"> • Sensors that “add value” to the performance • Sensors are used in ‘original’ or different ways • Communication between robots to develop the performance • Human-robot interaction (not remote control) • Robot-robot interaction <p>• Secondary: Use of markers, no line following</p>	/8
Technical Capabilities	<ul style="list-style-type: none"> • Demonstration of robots’ technical capabilities which are fully-working 	/15
Quality	<ul style="list-style-type: none"> • Clarity and quality of the demonstration 	/5
Deductions	<ul style="list-style-type: none"> • Each unplanned human intervention: -3 • Restarts: -3 for each re-start • Allotted time: -3 for each 10 seconds over • Within area: -3 for each infraction of the boundary <p>Teams that infringe the rules should be warned that such infringements will not be allowed in the second performance and marks deducted appropriately at the judge’s discretion.</p>	
Total Score		/60



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Technical Interview Score Sheet

Category	Examples of how high marks may be achieved are:	Mark
Programming	<ul style="list-style-type: none">Using an age appropriate programming languageAble to explain how the program works and interactions between the hardware and softwareCreating innovative programming solutions	/8
Mechanical Hardware	<ul style="list-style-type: none">Implementing reliable mechanical systemsComplex/innovative mechanical systemsAble to explain how the mechanical systems workMechanisms for precision or mechanically 'difficult' situationsAppropriate actuators have been used, and there is an understanding of why they have been chosen.	/8
Electronic Hardware	<ul style="list-style-type: none">Electronics have been developed/home built (as age appropriate)An understanding of how the electronics worksInnovative use of sensors/integration of sensorsInnovative use of technologies to aid performance (e.g., cameras, speed/motor controllers, GPS, different micro-controllers etc.)	/8
Robotic Communication & Interaction	<ul style="list-style-type: none">Use of effective robotic communicationAn understanding of how the communication is occurringSensors used to achieve robot-robot/prop/human interaction, for example robots following robots	/6
Explanation	<ul style="list-style-type: none">Explanation of robots' capabilitiesExplain decisions made and any limitations	/10
Deductions (at discretion of judges – up to 15 marks each)	<ul style="list-style-type: none">If the work does not appear to be that of the studentsRe-use of components from previous competitionsUse of a kit or publicly available instructions with no modifications	
Total Score		/40

Award Recommendations:

Notes: