



ROLLER COASTER B – 2019

Rank:	_____
Final Score:	_____

Team Number: B____ Team Name: _____

Student Names: _____

2.a. One Roller Coaster (a track that guides a ball/sphere), at least one ball/sphere, tools, spare parts, and data/notes are impounded before the start of the competition. **1. Y N**

2.c Participants wear proper eye protection and have no unresolved safety issues. **2. Y N**

Event Parameters, Construction Parameters, and Competition Parameters

3.a. The Roller Coaster is designed so that the ball/sphere will travel from a Start Line to a Finish Line in as close to the given Target Time as possible. **Y N**

3.b. At all times during the competition, the device, excluding the ball/sphere, fits into 50 cm wide x 50 cm long x 60 cm high box sitting flat on the ground. **Y N**

3.f. There is exactly one clearly labeled Start Line and one clearly labeled Finish Line running perpendicular to the direction of ball/sphere travel on track designated before the Target Time is released. **Y N**

3.g. The Start Line and Finish Line positions are not adjusted after Impound and the overall dimensions of the device do not change during the competition. **Y N**

3.i. Magnets, electrical, and electronic devices are not used for any part of the Roller Coaster. **Y N**

3.l. Participants are able to answer questions regarding the design, construction, and operation of the device. **Y N**

4.a. Once the participants enter the event area to compete, they do not leave the area or receive outside assistance, materials, or communications **Y N**

ARE ALL OF THE ABOVE EVENT, CONSTRUCTION, & COMPETITION PARAMETERS MET? **3. Y N**

Individual Runs

Run 1 Run 2

4.c. If electronic levels are used, they are removed prior to their first practice or scorable run. **Y N Y N**

3.d. The ball/sphere is held in the ready-to run position by an unused #2 pencil held only in the participant's hand and the ball/sphere is released when a participant removes the pencil from the track. **Y N Y N**

4.g. The ball/sphere is placed completely behind the Start Line. **Y N Y N**

2.b. Participants use only one ball/sphere during a given run. **Y N Y N**

3.c. The ball/sphere is visible at all times. **Y N Y N**

3.e. The ball/sphere travels using only its own gravitational potential energy available at the ready-to-run position. No added energy by use of stored potential energy is used. **Y N Y N**

4.h. Participants do not touch the device during a scorable run. **Y N Y N**

3.k. The ball/sphere is captured after each run so it does not leave the Roller Coaster boundary. **Y N Y N**

ARE ALL OF THE ABOVE EVENT, CONSTRUCTION & COMPETITION PARAMETER MET FOR EACH RUN? **4. Y N 16. Y N**

Run Parameters

5.c. Device height, in cm, from the highest part of the device measured to the floor or the table (if used), rounded down to nearest cm. **5. _____ 17. _____**

5.e. Horizontal length of gap, measured from the end of the track the ball/sphere leaves to the closest part of the track the ball/sphere lands on, rounded down to the nearest cm. (Must be ≥ 5.0 cm)

Gap 1 (cm)	6. _____ 18. _____
Gap 2 (cm)	7. _____ 19. _____
Gap 3 (cm)	8. _____ 20. _____

4.i. Did the vehicle successfully reach the other side of the track?

Gap 1	9. Y N 21. Y N
Gap 2	10. Y N 22. Y N
Gap 3	11. Y N 23. Y N

4.h. Did the balls/sphere cross the Finish Line within 2 minutes? **12. Y N 24. Y N**

5.d. Run time, in sec, rounded down to the nearest second.

Timer 1	13. _____ 25. _____
Timer 2	14. _____ 26. _____
Timer 3	15. _____ 27. _____

Starts on the word "Go", ends when the complete ball/sphere crosses the Finish Line or outside the boundary of the device, 2 min after "Go," or the ball/sphere stops moving for 3 sec or more.

Others

4.b. Target Time in seconds **28. _____**

5.h.iv. Length and Width of the device in cm. **Length 29. _____ Width 30. _____**

General Rule. Disqualified (notify the team and their coach as soon as possible) **31. Y N**