MISSION POSSIBLE B – 2020

Rank: _____

Final Score:_____

Team Number: B___ Team Name: _____

Student Names: _____

Check-In / Setup

1.	**T**	**F**	6.e. The Device was impounded before the deadline. (leave this blank for Regional Tournament)
2.	**T**	**F**	2.b.,5.k Team is allowed to compete (e.g. participants wearing eye protection and the Device has no potential hazards or safety concerns, and the Device is not remotely timed/controlled).
3. Height: _____	**4. Width:** _____	**5. Depth:** _____	5.i. Dimensions of the Device in cm to the nearest 0.1 cm:
6.	**T**	**F**	6.b.ii. The top and at least 2 vertical walls are open or transparent.
7.	**T**	**F**	5.b.i. The ASL submitted on time at Device impound (State and National). Choose "False" for Regional.
8.	**T**	**F**	5.b.ii. The ASL uses the format specified on www.soinc.org.
9.	**T**	**F**	5.b.iii. The ASL is 100% accurate of intended scorable and non-scorable actions.
10.	**T**	**F**	5.b.iv. The scorable & non-scorable actions within the device are labeled as in the ASL.
11.	**T**	**F**	5.c.i. The participants use ≤ 30 minutes to set up their device.

Scoring:

12.	**T**	**F**	5.d. The Start Action completed (participant drops a golf ball into the Device from a point completely above the Device and the golf ball falls into the Device and initiates the next action.)
13.	**T**	**F**	4.c.i. A 3:1 ratio gear system is used to initiate the next action.
14.	**T**	**F**	4.c.ii. A wheel and axle is rotated to raise a golf ball ≥ 10 vertical cm so that the golf ball at the end of the lift initiates the next action.
15.	**T**	**F**	4.c.iii. Four free-standing, standard, non-magnetic, commercial dominos are knocked over in series with the fourth domino in the sequence initiating the next action.
16.	**T**	**F**	4.c.iv. Water is added to a container to raise a golf ball ≥ 5 cm so that the golf ball rolls out of the top of the container and initiates the next action.
17.	**T**	**F**	4.c.v. A screw is rotated to move a wingnut threaded on the screw ≥ 2 horizontal cm. After moving at least 2 horizontal cm, the wingnut contacts an object which initiates the next action.
18.	**T**	**F**	4.c.vi. A golf ball is pushed or pulled up an inclined plane with an IMA ≥ 2. After rising at least 10 vertical cm, the golf ball initiates the next action.
19.	**T**	**F**	4.c.vii. A Pulley (system) is used with an IMA ≥ 2 to lift a golf ball. After rising at least 10 vertical cm, the golf ball initiates the next action.
20.	**T**	**F**	4.c.viii. A 3rd class lever is used to raise a golf ball at least 5 vertical cm. After rising at least 5 vertical cm, the golf ball initiates the next action.
21.	**T**	**F**	4.c.ix. A wedge is pulled from under a golf ball so that it rolls. After rolling 20 cm in any direction, the golf ball initiates the next action.
22.	**T**	**F**	4.c.x. No more than 9V is used to power a stationary fan which uses moving air to push a floating object. After moving at least 10 horizontal cm on water, the floating object initiates the next action.
23.	**T**	**F**	4.c.xi. A wedge is pushed between two golf balls that are touching so that one golf ball moves. After moving at least 20 cm in any direction, the golf ball(s) initiate the next action.
24.	**T**	**F**	4.c.xii. A pendulum clock is started so that after running for at least 10 seconds, it initiates the next action.
25.	**T**	**F**	5.e. The Final Action is completed (The golf ball from the Start Action in 3.b. is moved at least 20 horizontal cm from its original resting position and placed on a golf tee so that it stays on the tee for at least three seconds. The ball is only touching the tee and nothing else.)
26.	**T**	**F**	5.f. The part of the Device that delivered the ball to the tee is automatically moved away so the ball is clearly unobstructed in all direction. The ball stays on the tee and no part of the Device (except the tee and tee holder) is within 10 cm of the ball in any direction.
27. _____			4.a. Target Operation Time (Regionals/Invitational: 60 sec; State: 61-90 s; National: 91-120 s)
28. _____			5.f. Operation Time of the Device in sec rounded down to the closest second
29. _____			5.g. Bonus: If the participants designated a timer as an action taking ≥ 10 seconds that does not use electricity or spring for power, how many seconds did the timer run before the Target Operation Time? The timer must successfully initiate the next action and for State/National tournament, the team must demonstrate how this timer is adjusted to account for increased length of Target Operation Time.
30.	**T**	**F**	6.c. All solid and liquid stay inside the measured dimensions of the Device.
31. _____			6.d.i. The number of spring timing action in the Device took longer than 10 seconds.
32.	**T**	**F**	6.d.ii. No electricity is used in the Device except for 3.c.x. (stationary fan)
33. _____			6.b.iii. The number of times the device is adjusted during the operation time. (max 3)