

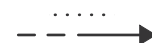
Great Ball Contraption



1. What is GBC?
2. What are the size requirements for a contraption?
3. What is the base unit of height/width used in building a contraption?
4. Know the GBC standard rules & regulations used in a show.
5. Define the key components of the contraption:
 - a. In-basket
 - b. Lift mechanism
 - c. Output
6. How are Technic™ pieces different from standard LEGO®? How are Technic axle and beam sizes measured?
7. Demonstrate your knowledge by either drawing or showing an example of the following pieces/parts:
 - a. Beam
 - b. Axle
 - c. Pin
 - d. Bush (1/2 or whole)
8. Define and give examples of the following pieces used in a contraption:
 - a. Gear
 - Rack and Pinion
 - Worm
 - Cam
 - b. Motor
 - c. Connector
 - d. Beam
 - e. Power Bank
9. Define and give examples of the different methods to move the ball.
10. Why is it critical that you test your contraption during the construction process, rather than waiting until the end?
11. Discuss standard building strategies:
 - a. Make sure all the bricks are fully connected/seated.
 - b. Make sure connectors/gears are not connected tightly.
12. Build a GBC from a kit or published instructions. It should have at least a 90% success rate (successfully move 27 out of 30 balls in and out of the contraption).
13. In a group, put together a connected collection of at least five modules, which must use at least three different lift mechanisms. Successfully transfer 27 out of 30 balls through the entire collection of individual modules.

Skill Level 1

Arts, Crafts, and Hobbies
North American Division
Original Honor 2026



VOCATIONAL
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2026 Edition