



Part 1: The Joy of Jenga



Jenga is played with 54 blocks that are stacked in groups of three to form a tower. Players take turns to remove a block from a tower and balance it on top, creating a taller and increasingly unstable structure. If the tower falls during your turn, you lose the game. Each block is three times as long as it is wide, and one fifth as thick as its length.

1. When the tower is first built, it is 27 centimeters tall. What is the thickness/height of each block? What is the length and width of each block?
2. Amazon boasts that the Jenga game comes in a “tube-shaped package with a handle for carrying and easy clean up.” If the tower stands upright in the container, what are the minimum dimensions of the tube? What is its volume?



3. Do you think this carrying case is the optimal way of storing the tower or is there a case that would use less material? Give a mathematical argument.

Part 2: Jumbo Jenga

You can also buy a jumbo yard-game sized version of Jenga. The length of a jumbo block is 7.5 inches.



About this item

- ✓ **GIANT SIZE:** Comes with 54 large precision-crafted wood blocks - 7.5" x [redacted]" x [redacted]" timbers for a full [redacted] storey / [redacted] ft. tall tower – the HIGHEST in the market!! (Can grow to [redacted] feet while playing) + Enjoy the free Wood Care Oil along with another small gift that awaits you inside.
- ✓ **PLAY ANYWHERE:** Perfect for indoor or outdoor events such as parties, BBQ's, tailgating, group events, camping and much more. Use a permanent marker to add numbers on each block and write down rules corresponding to each number to add spice to the game or play it as a drinking game.
- ✓ **EASY TO CARRY:** Includes heavy duty, high-quality & high-strength 10 Oz Canvas carry bag for easy storage and transport.
- ✓ **SUPERSIZE YOUR GAME TO SUPERSIZE YOUR FUN!** Gather round your friends to entertain any crowd, or play alone, designed for ages 8 to infinity! Makes for a very interesting and exciting gift. No complicated or awkward trying-to-figure-this-game-out eternity of rules in front of everybody.
- ✓ **UNBEATABLE QUALITY:** Sustainably sourced from kiln dried New Zealand Pinewood. SANDED ROUND EDGES TO PROTECT FROM PAINFUL SPLINTERS *Costs us more but your safety is our priority*. NO splitting, cracking, twisting, & warping on blocks. Extra Smooth Finish for great playability. We offer a 30 day, no questions asked, 100% money back guarantee. It's simple! If you don't like it, ship it back and get a refund!

4. Figure out the other dimensions of a jumbo Jenga block. How tall is this tower at the beginning of the game?
5. How many times bigger is this tower than the original Jenga tower?
6. The tower grows as players continue stacking blocks on top. What is the tallest this tower can get? Explain your reasoning.
7. If we were to design a case for this game, what would be its minimum volume?
8. Does the way the blocks are arranged in the case matter? How do you think the manufacturer decides on the dimensions of the case?