FRIENDLY GET-TOGETHER

Bet you can out-tug a tug-of-war!

THE SETUP
You can out-pull four big people with this stunt. No kidding. You will need two broomsticks and about twenty feet of strong rope. This trick can be done with two or four other people. Our directions are for two people. Have both people hold a broomstick in front of them. They should stand about three feet apart. Tie the end of the rope securely to one broomstick about a foot from the end. Wind it around both broomsticks about five times. Be sure the rope does not cross itself at any time. You hold the end of the rope next to one of the broomstick holders. When you give the signal, the holders try to keep the two broomsticks from coming together while you pull on the rope. Much to everyone’s amazement, they will not be able to resist your force. You will pull the tug-of-war together single-handedly. This trick is even more impressive with four people, two on each broomstick.

INSIDER INFORMATION
Mother Nature is giving you a mechanical advantage here. You are setting up a pulley system. Pulleys are simple machines that change the direction of force. A single change of direction doesn’t make a job easier, but when you change directions more than once, you have gained a mechanical advantage. When you wrap the rope around the broomsticks you have four changes of direction, so you can multiply your pulling power by four. Let’s say that everyone exerts a force of fifty pounds. The tug-of-war is at a stalemate, with equal amounts pulling against each other. You give one team (the one pulling in the same direction you are) an advantage with your force. It tips the balance and you win. Yay