

Christmas? Scientists have tried to answer the question

No known species of reindeer can fly, but there are 300.000 species of living organism yet to be classified. Although most of these are insects and bacteria, this does not rule out flying reindeer.

According to the Population Reference Bureau, 378 million people celebrate Christmas worldwide. With an average of 3.5 children per home, that's 91.8 million homes for Santa to visit.

Thanks to different time zones, Santa has 31 hours of Christmas to work with, assuming he travels east to west. This works out to 822.6 visits per second. That means for each celebrating household with at least one good child in it, Santa has 1/1000th of a second to park, hop out of the sleigh, jump down the chimney, fill the stockings, place presents under the tree, eat the cookies and return to the sleigh.



Assuming that all 91.8 million stops are evenly distributed throughout the earth, the total trip time will be 75.5 million miles. That means Santa's sleigh must move at 650 miles per second, 3000 times the speed of sound. For purposes of comparison, the fastest man-made vehicle on earth (the Ulysses space probe) moves at 27.4 miles per second.

Assuming that each child get nothing more than a medium-sized Lego set (weighing 2 pounds), the sleigh is carrying a payload of 321.300 tons, not counting jolly ol' Saint Nick himself.

A standard reindeer can pull no more than 300 pounds. Even if flying reindeer might pull 10 reindeer, payload, Santa and sleigh would therefore weigh more than 353.430 tons. This is four times the weight of the Queen Elisabeth II cruise ship.

This 353.430 tons travelling at 650 miles per second creates tremendous air resistance, heating the reindeer in the same manner as a spacecraft re-entering the earth's atmosphere. The lead pair of reindeer would therefore absorb 14.3 quintillion joule of energy, per second, each.

The lead reindeer, as a result will burst into flames, exposing the reindeer behind them and creating massive sonic booms in their wakes. The entire reindeer team will be vaporized within 0.00426 seconds. Santa will be subjected to centrifugal forces 17.500 times greater than gravity. Assuming that Santa weighs 250 pounds, he would be pinned to the back of the sleigh by 4.375.000 pounds of centrifugal force.



Conclusion: If Santa eventually existed and delivered presents, he is dead now. **Please:** One of our mathematicians must prove this wrong. We hope for the counter evidence in our next newsletter.