

Typical Super Bowl Scores?

Name _____

How many points will be scored this Super Bowl? Round to the nearest hundredth when necessary. To get a clearer idea let's look at the last twelve Super Bowl scores:

LII	Feb 4, 2018	Philadelphia Eagles 41, New England Patriots 33
LI	Feb 5, 2017	New England Patriots 34, Atlanta Falcons 28
L	Feb 7, 2016	Denver Broncos 24, Carolina Panthers 10
XLIX	Feb 2, 2015	New England Patriots 28, Seattle Seahawks 24
XLVIII	Feb 2, 2014	Seattle Seahawks 43, Denver Broncos 8
XLVII	Feb. 3, 2013	Baltimore Ravens 34, San Francisco 49ers 31
XLVI	Feb. 5, 2012	New York Giants 21, New England Patriots 17
XLV	Feb. 6, 2011	Green Bay Packers 31 Pittsburgh Steelers 25
XLIV	Feb. 7, 2010	New Orleans Saints 31 Indianapolis Colts 17
XLIII	Feb. 1, 2009	Pittsburgh Steelers 27 Arizona Cardinals 23
XLII	Feb. 3, 2008	New York Giants 17, New England Patriots 14
XLI	Feb. 4, 2007	Indianapolis Colts 29, Chicago Bears 17

1. What is the mean score for the winning team in the Super Bowl? Make sure to show or explain your method.
2. What is the mean score for the losing team in the Super Bowl? Make sure to show or explain your method.
3. By using the mean of the winning and losing scores, what is the mean Super Bowl final score? By how many points on average does the winning team beat the losing team by?
4. Find the median score of the winning teams in the Super Bowl. Make sure to show or explain your method.
5. Find the median score of the losing teams in the Super Bowl. Make sure to show or explain your method.
6. By using the median of the winning and losing scores, by how many points does the winning team beat the losing team by?
7. What is the median of all of the Super Bowl scores, winning and losing?
8. Now that you have used both the mean and median to explore the typical Super Bowl score, which statistic seems to better represent the data? Why?
9. Looking at all scores, winning or losing, is there a mode of the data set? If so, what is it? Knowing what you know about football scoring and typical game scores, does it make sense that this score would be the mode?

10. Another statistic that we have not talked about is the range. Find the range for each:
- Which of the twelve Super Bowls had the greatest range? Which Super Bowl was that and what was the range?
 - Find the range of the scores of the winning Super Bowl teams.
 - Find the range of the scores of the losing Super Bowl teams.
 - Find the range of all of the Super Bowl scores from the data set.
11. Next year we will add the 2019 Super Bowl score to this data set. How many points will the 2019 losing team need to score so that the new 13-year mean of the losing scores is exactly 20 points? How many points will the winning team need to score so that the 13-year mean is exactly 30 points? Show or explain your method.
12. If the 2019 Super Bowl score is 3 – 0, will that have a greater effect on the mean Super Bowl score or the median Super Bowl score? Show or explain your reasoning.

Source for data: <http://www.espn.com/nfl/superbowl/history/winners>

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