

One of the way to remove Outliers is trimmed mean

- A trimmed mean removes a small designated percentage of the largest and smallest values before calculating the average.
- Using a trimmed mean helps eliminate the influence of outliers or data points on the tails that may unfairly affect the traditional mean.

Example of a Trimmed Mean

Let's say, as an example, a figure skating competition produces the following scores: 6.0, 8.1, 8.3, 9.1, and 9.9.

The mean for the scores would equal:

$$((6.0 + 8.1 + 8.3 + 9.1 + 9.9) / 5) = 8.28$$

To trim the mean by a total of 40%, we remove the lowest 20% and the highest 20% of values, eliminating the scores of 6.0 and 9.9.

Next, we calculate the trimmed mean based on the calculation:

$$(8.1 + 8.3 + 9.1) / 3 = 8.50$$

In other words, a mean trimmed at 40% would equal 8.5 versus 8.28, which reduced the outlier bias and had the effect of increasing the reported average by 0.22 points.

Note: Total Trim % means that divide the total for both sides, just trim % means that each side trim % is given. E.g total trim 30% means 15% lower & 15% upper while trim 30% means that 30% lower & 30% upper.