

Comparing Group Scores on the SAT

Use this table to determine the margin of error in estimating the mean difference in true scores between two groups of students. The computed difference between the group means, plus or minus the margin of error, gives the range of possible differences between the true score means for the two groups.

Average Group Size	Margin of Error	Average Group Size	Margin of Error	Average Group Size	Margin of Error
10	28.2	160	6.6	400	4.2
20	19.2	170	6.4	450	3.9
30	15.5	180	6.2	500	3.7
40	13.4	190	6.1	550	3.5
50	11.9	200	5.9	600	3.4
60	10.8	210	5.8	650	3.3
70	10.0	220	5.6	700	3.1
80	9.4	230	5.5	750	3.0
90	8.8	240	5.4	800	2.9
100	8.4	250	5.3	850	2.9
110	8.0	275	5.0	900	2.8
120	7.6	300	4.8	950	2.7
130	7.3	325	4.6	1000	2.6
140	7.1	350	4.5	1500	2.1
150	6.8	375	4.3	2000	1.9

How to Use This Table

- Use this table when comparing mean scores of similar groups (on either Math or Verbal, but not M+V).
- First, compute the difference in the observed mean scores for the two groups being compared.
- Next, determine the average size of the two groups for which you are comparing scores, and locate that value in the column labeled “Average Group Size.”
- Locate the number to the right of the group size, in the column marked “Margin of Error.” This number shows how much we can expect the computed difference in mean observed scores to differ from the actual difference in mean true scores for two groups. Use this number to create an error band around the computed difference in means. For example, if each of the groups being compared has 750 people in it, then the margin of error (from the table) is 3. So, if the observed mean difference between the groups is 12, then we would expect the true mean difference to be somewhere between 9 and 15 (12 ± 3).

Points to Note

- Use this table when information is available on all (or almost all) of the people in the groups to be compared. If data are available on only a small sample from each group, then the margin of error can be much larger than what is indicated by the table.
- This table is most appropriate for comparing groups of approximately equal size. If the larger group is more than three times the size of the smaller group, it may be advisable to look up the smaller group size instead of the average group size in the table to get a more conservative estimate of the margin of error.
- A score range obtained using the above table gives an idea of how large or small the true score difference between two groups might be. No statistical method can tell whether such a difference is important. Such an interpretation is best made in the context of the actual situation under consideration (for example, what is known about the groups being compared; what would be the practical effect of a difference as large as the estimated one).
- The difference between the two group means is statistically significant if the range computed above does not include a value of zero. However, a statistically significant difference is not necessarily meaningful or important.