



LMI Player Rating System v2.0

(w.e.f May 2011)



Tests	At any point, the TWELVE most recent LMI monthly tests are included for ratings computation. If any other tests are to be considered for ratings, LMI will announce beforehand.																										
Weights	Recent tests carry higher weight as compared to older tests. The weights will be as shown below (Test 1 is the oldest and Test 12 is the most recent): <table border="1" style="margin: 10px auto;"> <thead> <tr> <th>Test #</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> <th>6</th> <th>7</th> <th>8</th> <th>9</th> <th>10</th> <th>11</th> <th>12</th> </tr> </thead> <tbody> <tr> <th>Weight</th> <td>60%</td> <td>60%</td> <td>60%</td> <td>70%</td> <td>70%</td> <td>80%</td> <td>80%</td> <td>90%</td> <td>90%</td> <td>100%</td> <td>100%</td> <td>100%</td> </tr> </tbody> </table>	Test #	1	2	3	4	5	6	7	8	9	10	11	12	Weight	60%	60%	60%	70%	70%	80%	80%	90%	90%	100%	100%	100%
Test #	1	2	3	4	5	6	7	8	9	10	11	12															
Weight	60%	60%	60%	70%	70%	80%	80%	90%	90%	100%	100%	100%															
Prorated Score (PS)	For every test, the score is converted into a PS on a scale of 0-1000. For every test, the median score (from all non zero scores) is given a PS of 500 and the top score corresponds to a PS of 1000. All scores above the median will have a PS on a linear scale from 500-1000. All scores below the median will have PS on a linear scale from 0-500.																										
Rank Score (RS)	For every test, a RS is calculated based on rank. RS = [1 - (No of players ranked above the player)/(Total players with non zero scores)] * 1000																										
Normalized Score (NS)	NS = (0.75 * PS) + (0.25 * RS)																										

Time taken to finish the test	This factor is not considered separately, and it is assumed to be factored in the test scoreboards.
Reference formulae	<p>Overall Weight $N = \sum (\text{Weights of 12 tests}) - \sum (\text{Weights of tests authored/tested})$</p> <p>Upper Threshold $U = 2/3 \times N$</p> <p>Lower Threshold $L = 1/3 \times N$</p> <p>Participation Weight $K = \sum (\text{Weights of tests in which participated as a player})$</p> <p>Penalty Weight $K_p = K + ((L - K) / K)$</p>
Author/Tester	Tests where a player was Author/Tester are not included in the calculations for the concerned player. In such cases, the values of N, U and L will be lower.
Rating calculations	<p>There can be three cases. Every player will fall into one of these:</p> <p>Case A: Player has played too few tests ($K < L$) Rating = (Weighted Average Score of ALL participated tests * K / K_p), i.e., the rating is reduced by a penalty factor depending on number and recency of tests.</p> <p>Case B: Player has played average number of tests ($L \leq K \leq U$) Rating = Weighted Average Score of ALL participated tests.</p> <p>Case C: Player has been very regular and played many tests ($K > U$) Rating = Weighted Average Score for the best performances of the player in tests with the condition that the sum of weights = U.</p>
Inactive Players	Names shall be removed from the rating list if a player misses 12 tests in a row.
Puzzle and Sudoku Rating	<p>Puzzle and Sudoku ratings are different.</p> <p>The Puzzle ratings will consider the 12 most recent puzzle tests while the Sudoku ratings will be based on the 12 most recent Sudoku tests.</p>