Analysis of Tooth-Size Discrepancies

Bolton Analysis

Patient Name   **Date**

MESIODISTAL TOOTH SIZES

R | | | | | | | | | | | | | L

OVERALL RATIO   **Mean:** 91.3   **Range:** 87.5 - 94.8

Sum mandibular 12   mm.

$$\frac{\text{Sum mandibular 12 mm.}}{\text{Sum maxillary 12 mm.}} = \quad \times 100 = \quad \%$$

Sum maxillary 12   mm.   Overall Ratio

Overall ratio >91.3%   **Overall ratio <91.3%**

mm.	mm.	mm.	mm.	mm.	mm.
Actual mand 12	Ideal mand 12	Diff.	Actual max 12	Ideal max 12	Diff.

ANTERIOR RATIO   **Mean:** 77.2   **Range:** 74.5 - 80.4

Sum mandibular 6   mm.

$$\frac{\text{Sum mandibular 6 mm.}}{\text{Sum maxillary 6 mm.}} = \quad \times 100 = \quad \%$$

Sum maxillary 6   mm.   Anterior Ratio

Anterior ratio >77.2%   **Anterior ratio <77.2%**

mm.	mm.	mm.	mm.	mm.
Actual mand 6	Ideal mand 6	Diff.	Actual max 6	Ideal max 6	Diff.

Ref: 1) Disharmony In Tooth Size And Its Relation To The Analysis And Treatment Of Malocclusion by Wayne A. Bolton, D.D.S., M.S.D. Angle Orthod (1958) 28 (3): 113–130. 2) What is Bolton Analysis?” by P.S. Dinesh. Gonion Vol. 1, Issue 2, May-August 2010.*

Clear Form

PATIENT ANALYSIS

Overall Ratio

If the overall ratio exceeds 91.3 the discrepancy is in excessive mandibular arch length. In the provided chart locate the patient's maxillary 12 measurement, and opposite it is the correct mandibular measurement. The difference between the actual and correct mandibular measurement is the amount of excessive mandibular arch length.

OVERALL RATIO					
Refer to this table for the average values for the overall and anterior ratio (values are in mm)					
Max12 :	Mand12	Max12 :	Mand12	Max12 :	Mand12
85	77.6	94	85.8	103	94.0
86	78.5	95	86.7	104	95.0
87	79.4	96	87.6	105	95.9
88	80.3	97	88.6	106	96.8
89	81.3	98	89.5	107	97.8
90	82.1	99	90.4	108	98.6
91	83.1	100	91.3	109	99.5
92	84.0	101	92.2	110	100.4
93	84.9	103	93.1		

Anterior Ratio

If the Anterior ratios is less than 77.2%, it indicates maxillary anterior excess and if the anterior ratio is more than 77.2%, it indicates mandibular anterior excess (the total width of the lower six anterior teeth is relatively too large or maxillary anterior deficiency such as a peg shaped lateral incisor.

ANTERIOR RATIO					
Refer to this table for the average values for the overall and anterior ratio (values are in mm)					
Max6 :	Mand6	Max6 :	Mand6	Max6 :	Mand6
40.0	30.9	45.5	35.1	50.5	39.0
40.5	31.3	46.0	35.5	51.0	39.4
41.0	31.7	46.5	35.9	51.5	39.8
41.5	32.0	47.0	36.3	52.0	40.1
42.0	32.4	47.5	36.7	52.5	40.5
42.5	32.8	48.0	37.1	53.0	40.9
43.0	33.2	48.5	37.4	53.5	41.3
43.5	33.6	49.0	37.8	54.0	41.7
44.0	34.0	49.5	38.2	54.5	42.1
44.5	34.3	50.0	38.6	55.0	42.5
45.0	34.7				

Please note: ClearCorrect does not require this information for case submission, or treatment planning but it can be a useful tool to help with more detailed treatment planning when needed.