

BOLTON ANALYSIS

CASE #1

Sum of 6 MD Anterior Teeth	36 mm.
Sum of 6 MX Anterior Teeth	52 mm.

<u>6 MD Teeth 36 mm.</u>	x 100% = 69.2%
6 MX Teeth 52 mm.	

Mean Value 77.2%
If Anterior Ratio is Less Than 77.2%
MX 6 Anterior Teeth are Excessive

Therefore assume 6 MD anterior teeth are normal.

Actual Width MD 6 Anterior Teeth	36 mm.
Ideal Width MX 6 Anterior Teeth	46.7 mm. (According to Tables)

Actual Width MX 6 Anterior Teeth	52.0 mm.
Ideal Width MX 6 Anterior Teeth	<u>46.7 mm.</u>
Difference	5.3 mm. (Excessive)

CASE #2

Width MD 6 Anterior Teeth	41.5 mm.
Width MX 6 Anterior Teeth	48.0 mm.

<u>6 MD Teeth 41.5 mm.</u>	x 100% = 86.4%
6 MX Teeth 48.0 mm.	

Mean Value 77.2%
If anterior ratio is more than 77.2%
MD 6 anterior teeth are excessive

Therefore, assume 6 MX anterior teeth are normal.

Actual Width MX 6 Anterior Teeth	48.0 mm.
Ideal Width MD 6 Anterior Teeth	37.0 mm. (According to Tables)

Actual Width MD 6 Anterior Teeth	41.5 mm.
Ideal Width MD 6 Anterior Teeth	<u>37.0 mm.</u>
Difference	4.5 mm. (Excessive)

BOLTON TOOTH SIZE ANALYSIS

Overall Ratio

Sum Mandibular "12" _____ mm.
 _____ x 100 = _____ % Overall Ratio

Sum Maxillary "12" _____ mm.

MX "12"	MD "12"	MX "12"	MD "12"	MX "12"	MD "12"
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	92.3	110	100.4
93	84.9	102	93.1	111	101.3

Patient Analysis

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

_____ - _____ = _____
 Actual MD "12" Correct MD "12" Excess MD "12"

If the overall ratio is **less than 91.3**:

_____ - _____ = _____
 Actual MX "12" Correct MX "12" Excess MX "12"

Anterior Ratio

Sum Mandibular "6" _____ mm.
 _____ x 100 = _____ % Anterior Ratio

Sum Maxillary "6" _____ mm.

MX "12"	MD "12"	MX "12"	MD "12"	MX "12"	MD "12"
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	34.4	50.0	38.6	55.0	42.5
45.0	34.7				

Patient Analysis

If the anterior ratio **exceeds 77.2**:

_____ - _____ = _____
 Actual MD "6" Correct MD "6" Excess MD "6"

If the overall ratio is **less than 77.2**:

_____ - _____ = _____
 Actual MX "6" Correct MX "6" Excess MX "6"