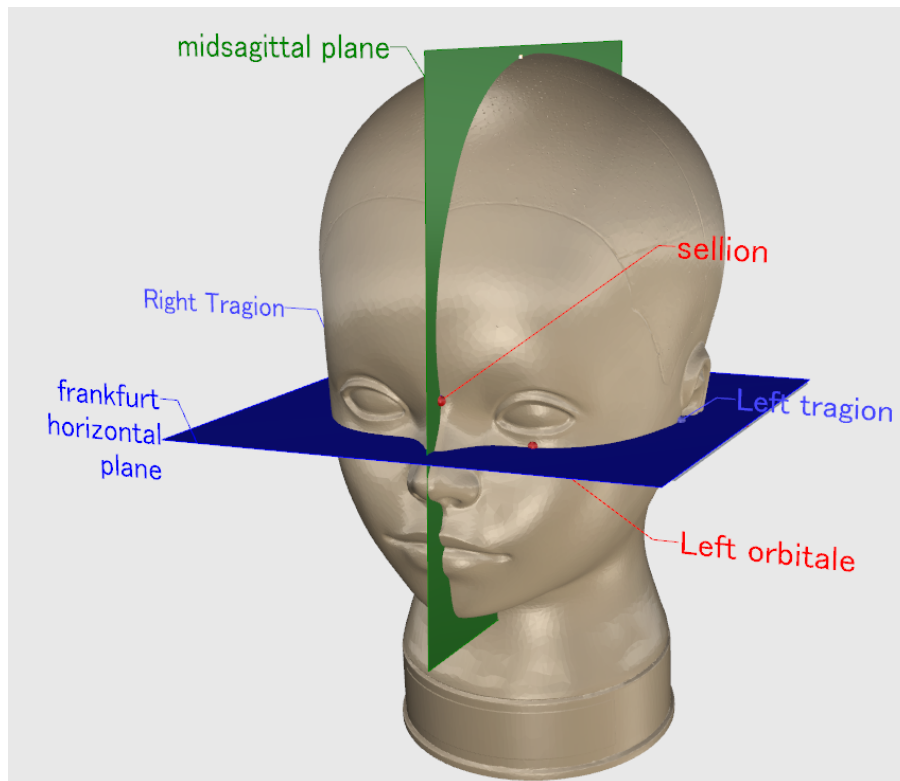
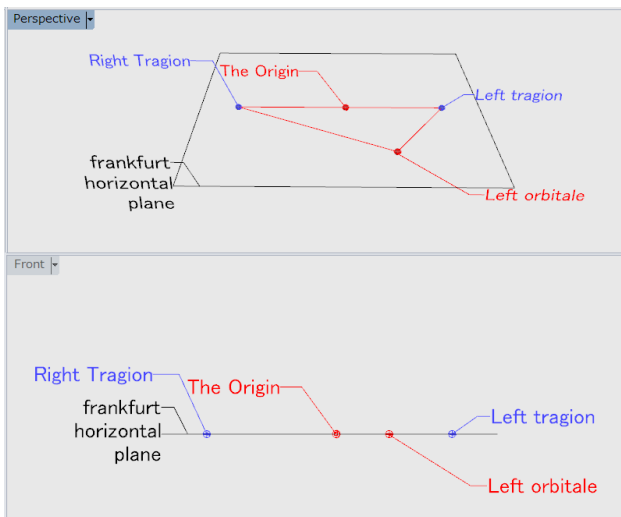


Head and Face Anatomical Landmark and Measurements

Axes & Plane: Frankfurt Plane and Midsagittal plane

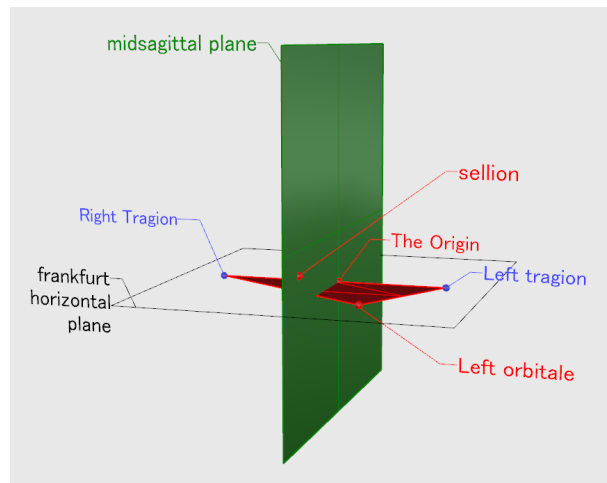


Horizontal Plane : Frankfurt Plane



The standard horizontal plane defined using the right and left Tragon and the left Orbitale, when the medial plane of the head is held vertically.

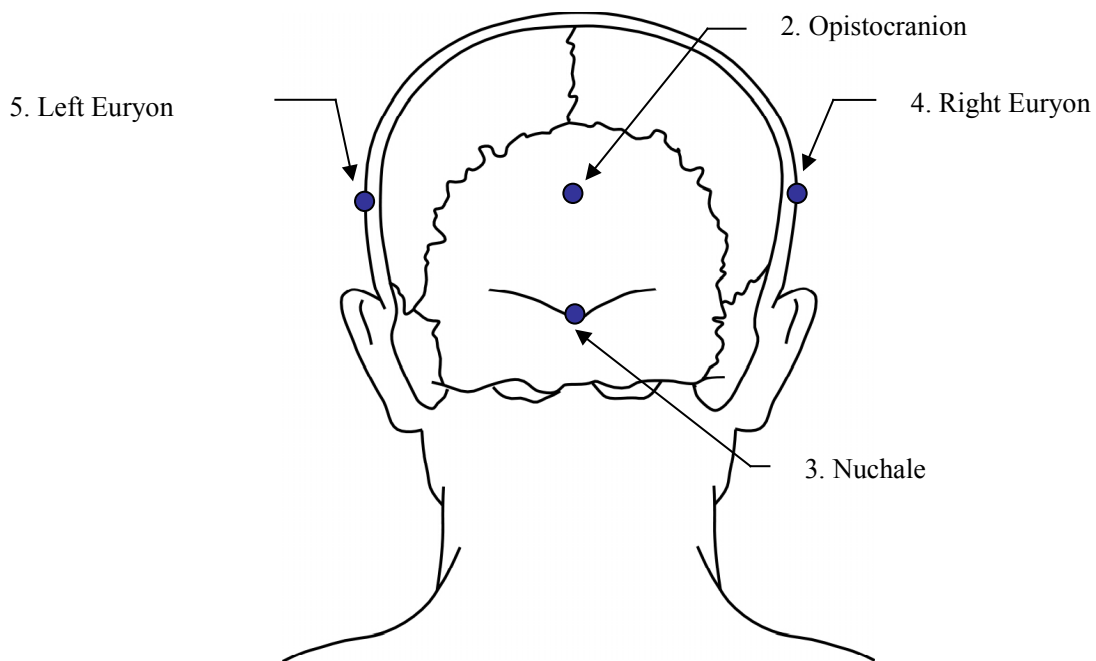
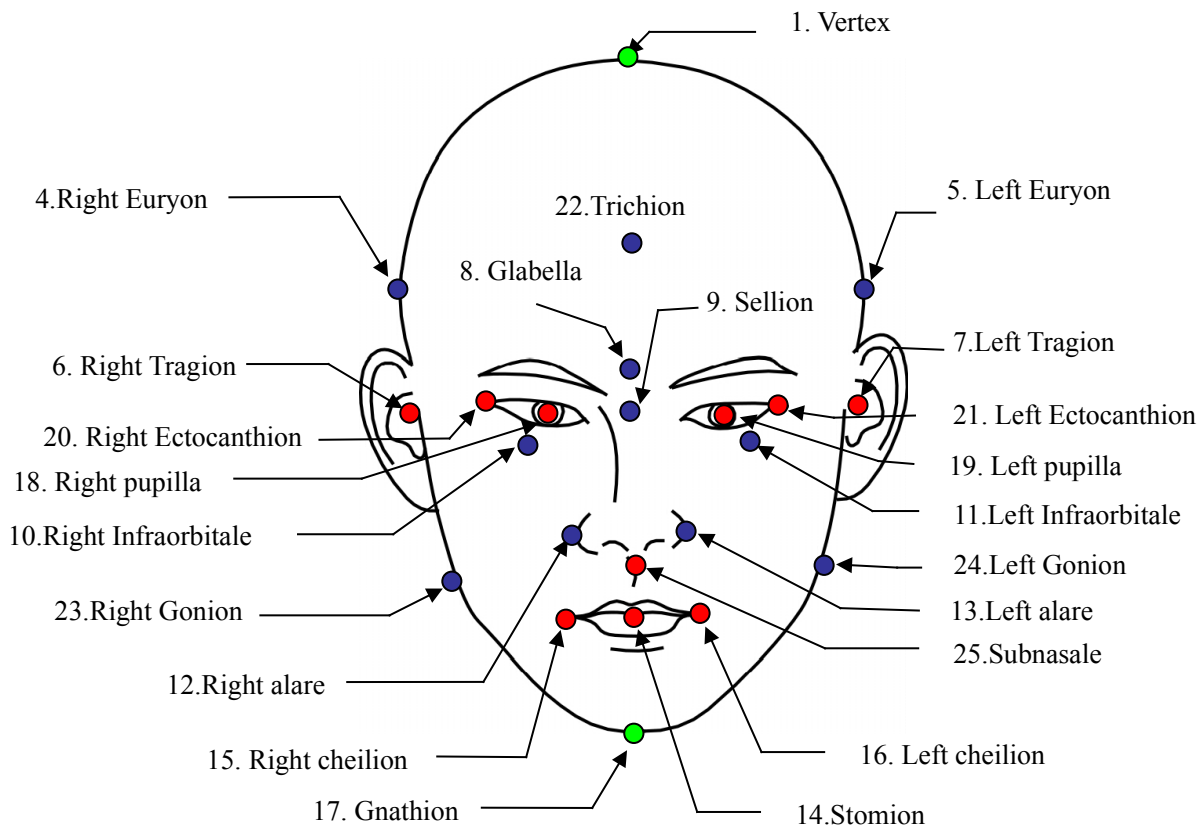
Vertical Plane : Midsagittal plane and Origin



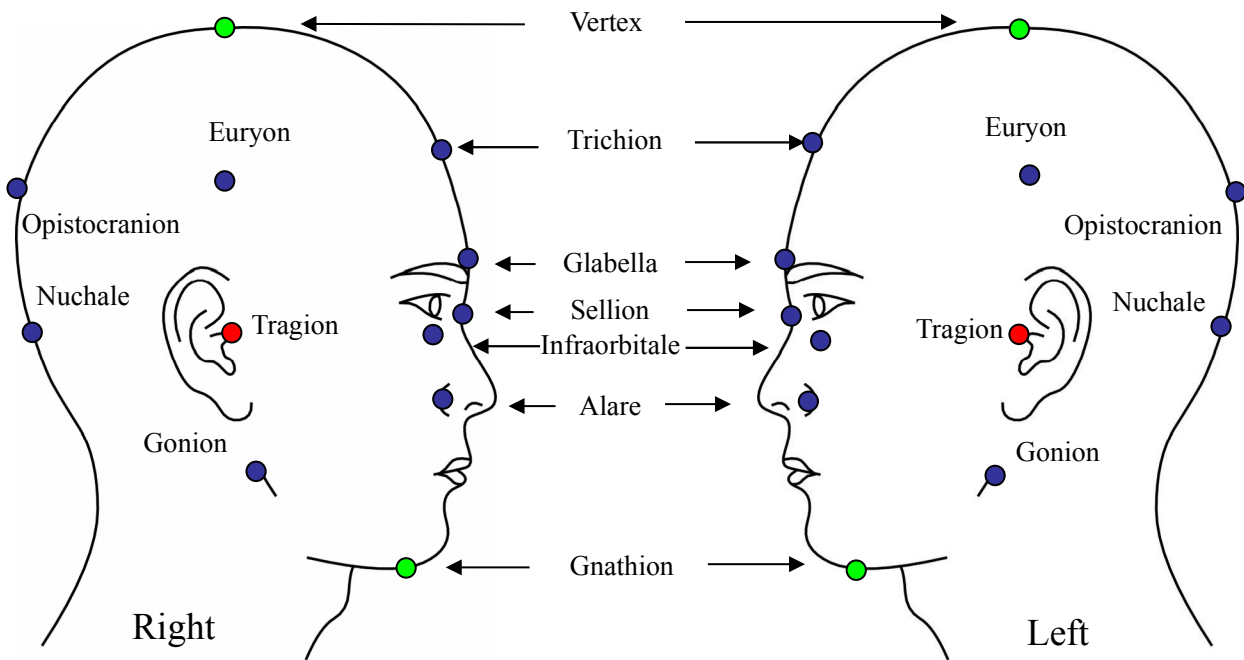
The anteroposterior (front to back) median plane of the body passes through Sellion and is perpendicular to Frankfurt plane and to the line between Left Tragon and Right Tragon.

The origin ($X=0, Y=0, Z=0$) is the point of intersection of the line between Left and Right Tragon and midsagittal plane.

Major Landmarks on Head and Face Front & Back



Major Landmarks on Head and Right and Left side



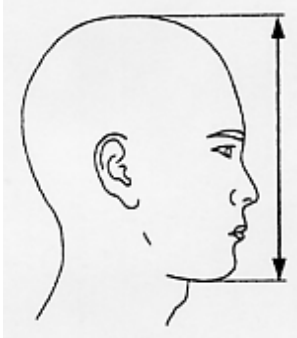
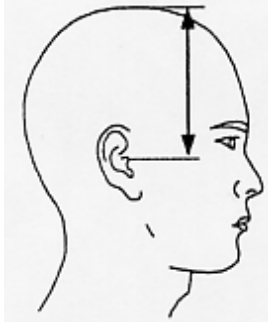
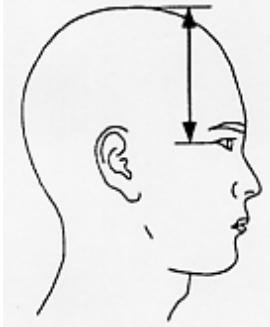
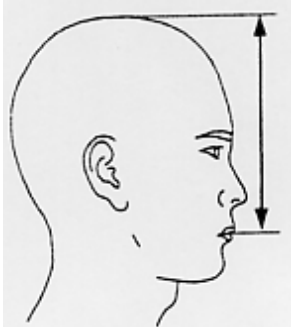
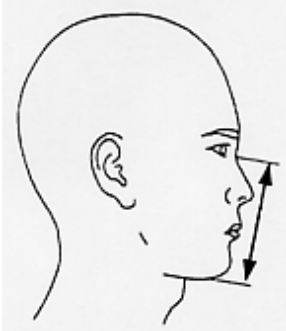
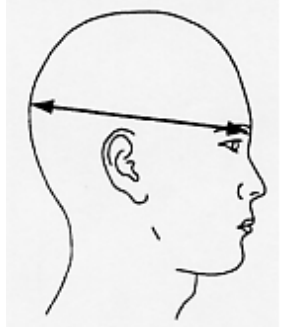
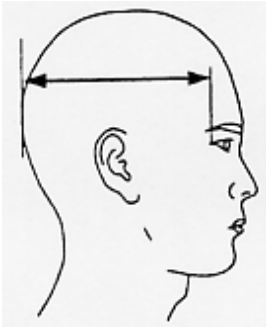
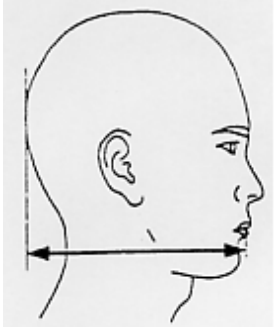
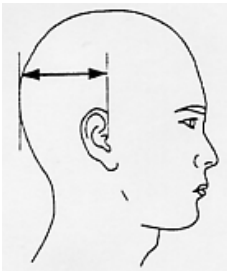
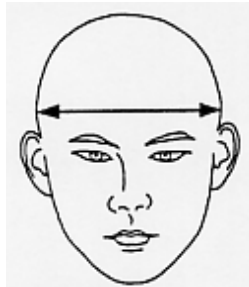
No.	Name	Explanation
1	Vertex	The highest point of the head in the midsagittal plane, with the head orientated in the Frankfurt plane.
2	Opistocranium	The measuring point of the maximum head length. The point furthest from Glabella in the midsagittal plane of the occiput.
3	Nuchale	The lowest point in the midsagittal plane of the occiput that can be palpated amid the nuchal muscles.
4	Right Euryon	The measuring point of the maximum head breadth. The two points opposite each other on the sides of the head which form the termini of the line of greatest breadth measured perpendicular to the midsagittal plane.
5	Left Euryon	
6	Right Tragion	The notch just above the tragus of the ear. The point where the upper edge of the tragus meets the head.
7	Left Tragion	
8	Glabella	The most anterior point of the forehead between the brow ridges in the midsagittal plane, with the head orientated in the Frankfurt plane.
9	Sellion	The most depressed point at the nasal root in the midsagittal plane, with the head orientated in the Frankfurt plane.
10	Right Infraorbitale	The middle point of the ectocanthion and the entocanthion, and on the margin of the orbit.
11	Left Infraorbitale	
12	Right Alare	the most lateral point on the nasal wing
13	Left Alare	
14	Stomion	The median point of the oral slit, when mouth is closed naturally.
15	Right cheilion	Point at the angle of mouth where the mucous membrane joins the skin
16	Left cheilion	
17	Gnathion	The lowest point of the tip of the chin in the midsagittal plane, with the head orientated in the Frankfurt plane.
18	Right pupilla	Center of the pupil

19	Left pupilla	
20	Right Ectocanthion	The outer corner of the palpebral opening.
21	Left Ectocanthion	
22	Trichion	Crossing point of the hairline and median line
23	Right Gonion	The lowest, rearmost, and the most lateral point at the gonial angle
24	Left Gonion	
25	Subnasale	point on the median line at the nasal septum where this joins the upper lip

Measuring Item

No.	Measuring Item names
1	Total head height
2	Right tragion to vertex height
3	Left tragion to vertex height
4	Right ectocanthion to vertex height
5	Left ectocanthion to vertex height
6	Stomion to vertex height
7	Morphologic face height
8	Head length
9	Occiput to right ectocanthion distance
10	Occiput to left ectocanthion distance
11	Occiput to stomion distance
12	Occiput to right tragion distance
13	Occiput to left tragion distance
14	Head breadth
15	Bitragion breadth
16	Head circumference
17	Sagittal arc
18	Bitragion arc
19	Bizygomatic breadth
20	Bigonial breadth
21	Physiognomic face height
22	Nose height
23	Nose breadth
24	Biocular breadth
25	Mouth breadth
26	Interpupillary breadth

Measuring Items & Figures

<p>1. Total head height</p> <p>The vertical distance between vertex and gnathion.</p> 	<p>2.-3. Tragion to vertex height</p> <p>The vertical distance between vertex and tragion.</p> 
<p>4.-5. Ectocanthion to vertex height</p> <p>The vertical distance between vertex and ectocanthion.</p> 	<p>6. Stomion to vertex height</p> <p>The vertical distance between vertex and stomion.</p> 
<p>7. Morphologic face height</p> <p>The straight-line distance between sellion and gnathion.</p> 	<p>8. Head length</p> <p>The straight-line distance between glabella and opistocranium. The largest length of the head in the midsagittal plane measured from glabella.</p> 
<p>9.-10. Occiput to Ectocanthion distance</p> <p>The horizontal distance between ectocanthion and the vertical plane tangent to the back of the head.</p> 	<p>11. occiput to stomion distance</p> <p>The horizontal distance between stomion and the vertical plane tangent to the back of the head.</p> 
<p>12.-13. Occiput to Tragion distance</p> <p>The horizontal distance between tragion and the vertical plane tangent to the back of the head.</p> 	<p>14. Head breadth</p> <p>Maximum breadth of the head above the ears, measured perpendicular to the midsagittal plane.</p> 

15.

Bitrignon breadth

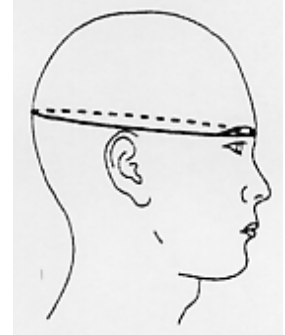
The straight-line distance between the right and left trignon.



16.

Head circumference

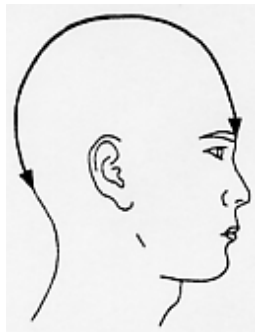
The minimum circumference of the head passing through glabella and the opistocranium.



17.

Sagittal arc

The surface distance from glabella over the head to nuchale.



18.

Bitrignon arc

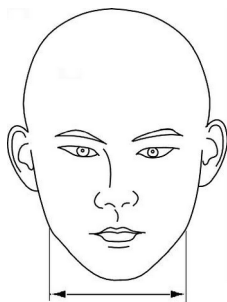
The surface distance between the right and left trignon across the top of the head measured perpendicular to the Frankfurt plane.



20.

bigonial breadth

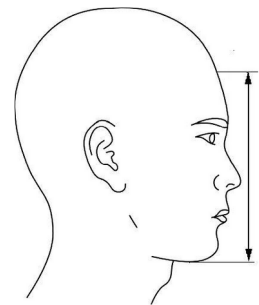
Distance between the right and left gonions.



21.

Physiognomic face height

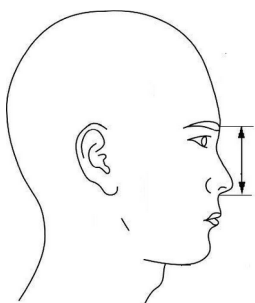
Distance between trichion and gnathion.



22.

Nose height

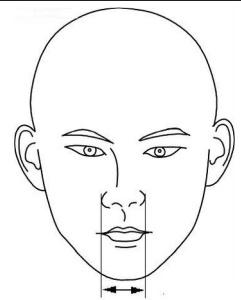
Distance between nasion and subnasale.



23.

Nose breadth

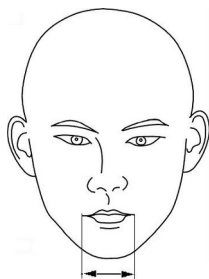
Distance between the right and left alares.



25.

Mouth breadth

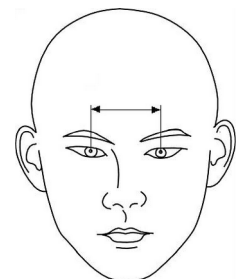
Distance between the right and left cheilions.



26.

Interpupillary

Distance between the right and left pupilla.



All Landmarks

0	Metopion	26	Left infraorbitale	52	Left mandibular ramus base point	78	Left euryon
1	Supraglabellare	27	Right supraorbitale	53	Right mental tuberculum	79	Right zygion
2	Glabellare	28	Left supraorbitale	54	Left mental tuberculum	80	Left zygion
3	Sellion	29	Labiomentale	55	Right mandibular corpus point	81	Mandible base line
4	Right medial orbital point	30	Pogonion	56	Left mandibular corpus point	82	Upper lip point
5	Left medial orbital point	31	Supragnathion	57	Right gonion	83	Lower lip point
6	Nosebridge point	32	Gnathion	58	Left gonion	84	Right cheilion
7	Right nosebridge side point	33	Pronasale	59	Right otobasion inferius	85	Left cheilion
8	Right medial superciliary arc point	34	Subnasale	60	Left otobasion inferius	86	Stomion
9	Right mid superciliary arc point	35	Right nostril point	61	Right tragus lower base point	87	Right pupil
10	Right lateral superciliary arc point	36	Right nosewing base top point	62	Left tragus lower base point	88	Left pupil
11	Right medial supragrabella line point	37	Right alare	63	Right tragion	89	Right ectocanthion
12	Right mid supragrabella line point	38	Right nosewing base point	64	Left tragion	90	Right entocanthion
13	Right lateral supragrabella line point	39	Left nosewing base top point	65	Right earbase top point	91	Right upper eyelid point
14	Left nosebridge side point	40	Left nostril point	66	Left earbase top point	92	Right lower eyelid point
15	Left medial superciliary arc point	41	Left alare	67	Right earbase posterior point	93	Left ectocanthion
16	Left mid superciliary arc point	42	Left nosewing base point	68	Left earbase posterior point	94	Left entocanthion
17	Left lateral superciliary arc point	43	Right zygomatic arch point	69	Right lateral mastoid point	95	Left upper eyelid point
18	Left medial supragrabella line point	44	Left zygomatic arch point	70	Left lateral mastoid point	96	Left lower eyelid point
19	Left mid supragrabella line point	45	Right lower angle of zygomatic	71	Right mastoidale	97	Median point of mandible base
20	Left lateral supragrabella line point	46	Left lower angle of zygomatic	72	Left mastoidale	98	LM99
21	Right marginal tubercle point	47	Right cheek top point	73	Vertex	99	LM100
22	Right temple point	48	Left cheek top point	74	Nuchale	100	Trichion
23	Left marginal tubercle point	49	Right side of mouth point	75	Occipital protuberance	101	Right otobasion superius
24	Left temple point	50	Left side of mouth point	76	Opistocranium	102	Left otobasion superius
25	Right infraorbitale	51	Right mandibular ramus base point	77	Right euryon		