Dental Anatomy

Dental Terminology and Numbering Systems

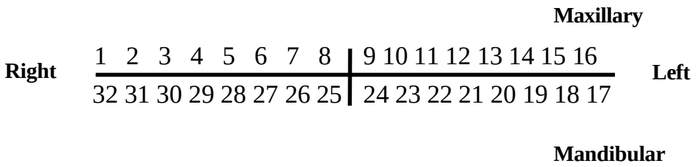
Lecture 2

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Numbering Systems

1. Universal notation system:

A. Permanent Teeth:



Examples:

#11: Permanent Maxillary Left Canine.

#29: Permanent Mandibular Right Second Premolar. #8: Permanent Maxillary Right Central Incisor.

B. Deciduous Teeth:



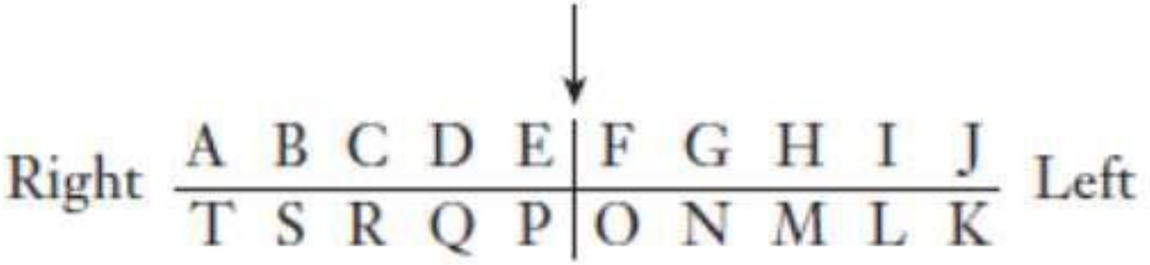
Examples:

#B: Deciduous Maxillary Right First Molar

#O: Deciduous Mandibular Left Central Incisor #D: Deciduous Maxillary Right Lateral Incisor

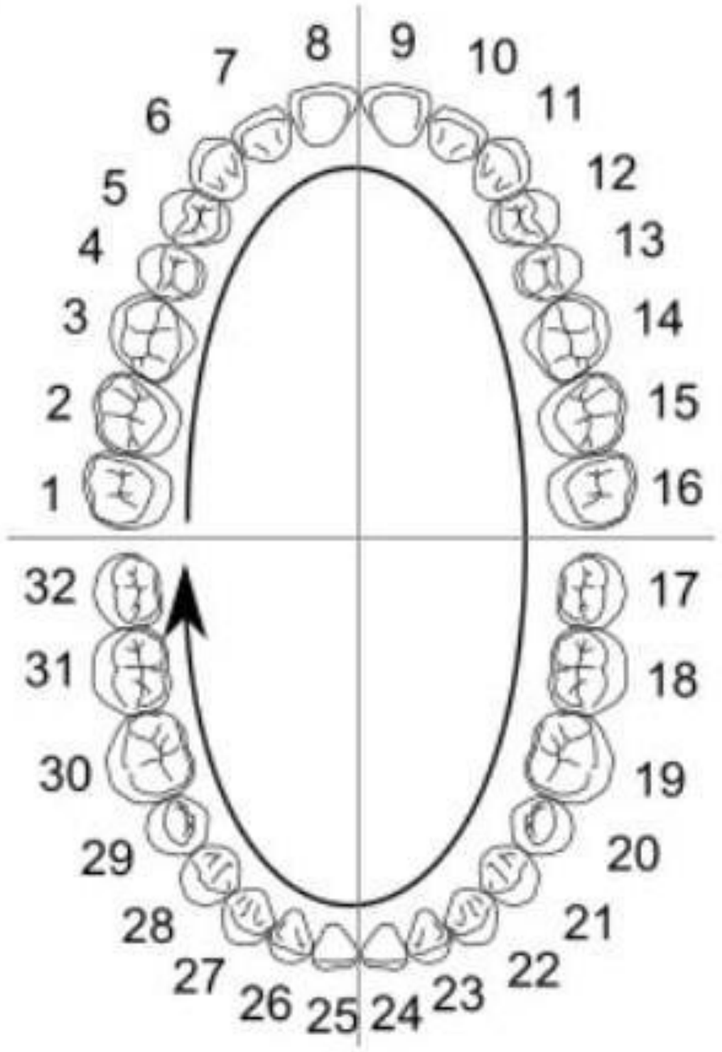
Notation systems (universal system)

- The **universal** system of notation for the primary dentition uses uppercase letters for each of the primary teeth:
- For the maxillary teeth, beginning with the right second molar, letters A through J,
- For the mandibular teeth, letters K through T, beginning with the left mandibular second molar.



Universal System

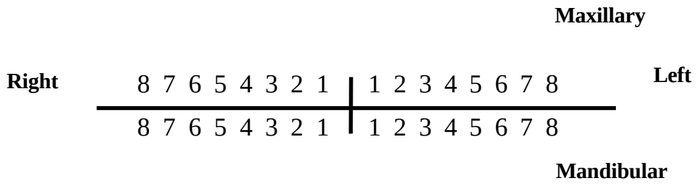
R



L

2.Palmer notation system:

A. Permanent Teeth:



Examples:

6 Permanent Maxillary Right First Molar

3 Permanent Mandibular Left Canine

8 Permanent Maxillary Left Third Molar

B. Deciduous Teeth:



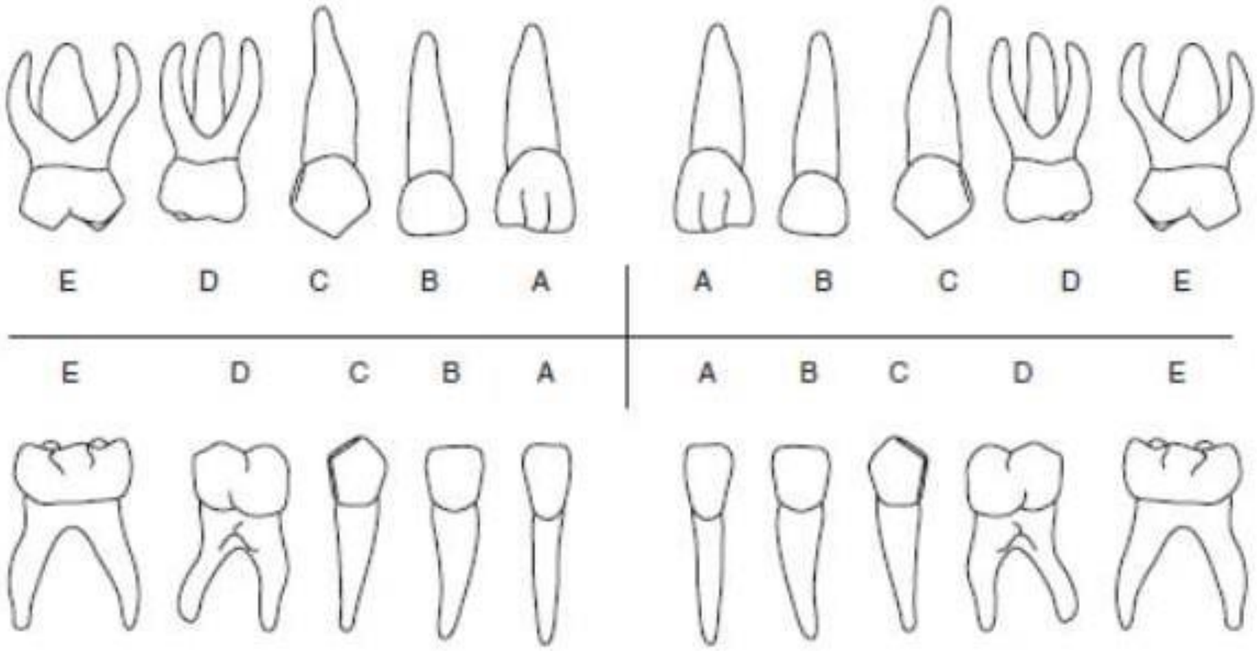
Examples:

B Deciduous Mandibular Left Lateral Incisor

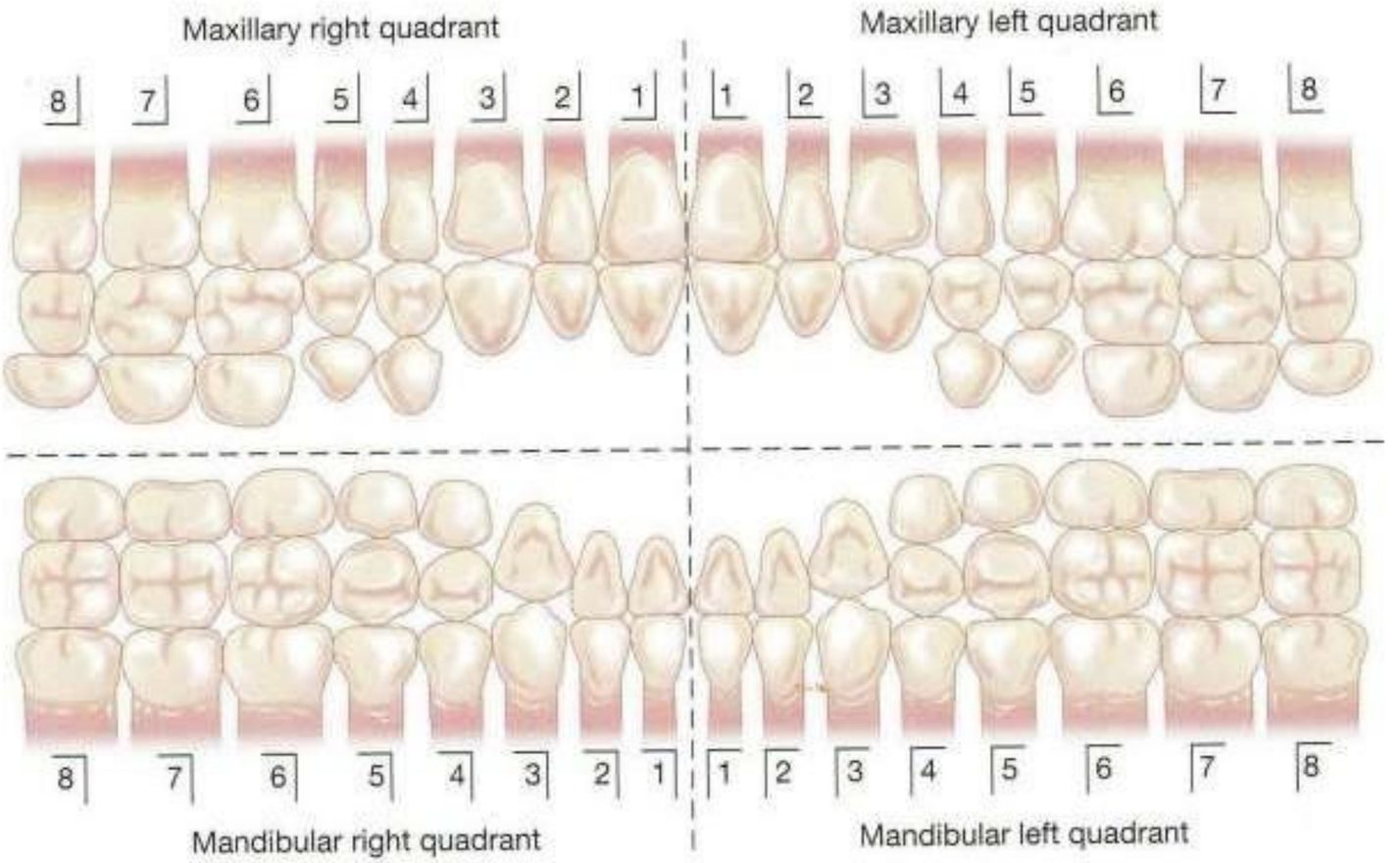
E Deciduous Maxillary Right Second Molar

C Deciduous Mandibular Right Canine

Palmer Notation System



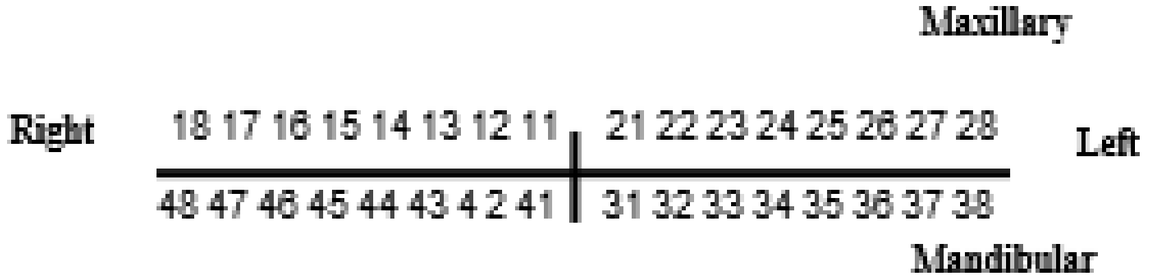
Palmer Notation System



2.FDI notation system:

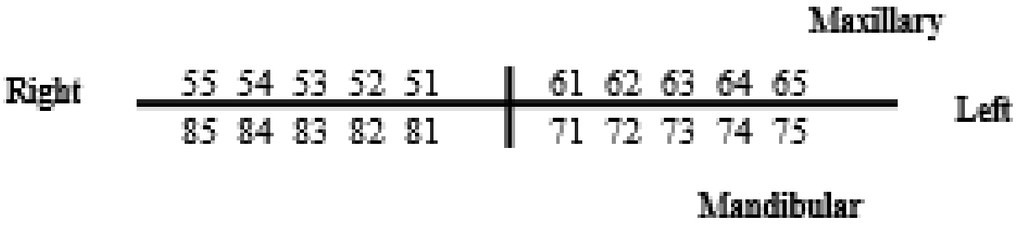
A. Permanent Teeth:

The first number represent the quadrant number and the second number represent the tooth bnumber
ex.:
Quadrant number for permanent teeth
1: upper right
2: upper left
3; lower left
4: lower right



B. Deciduous Teeth:

The first number represent the quadrant number and the second number represent the tooth number
ex.:
Quadrant number for primary teeth
5: upper right
6: upper left
7; lower left
8: lower right

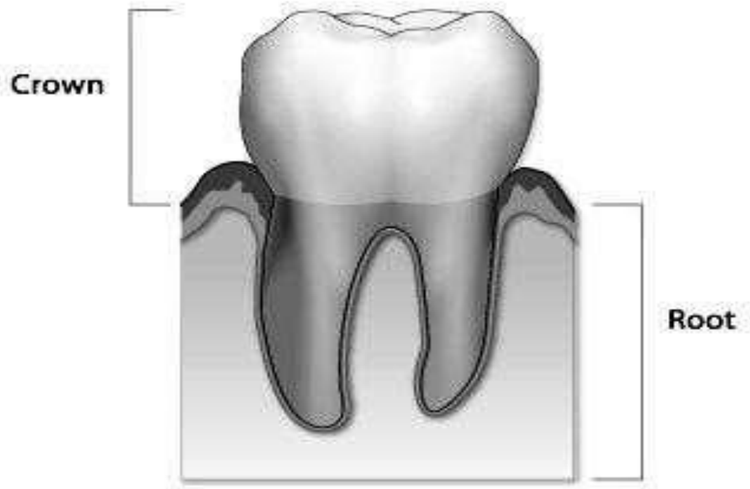


Crown and Root

The crown is covered with enamel. The root is covered with cementum and they join at the cemento-enamel junction (CEJ) or cervical line.

The enamel, cementum and dentin are the hard tissues of the tooth. The major bulk of the tooth is dentin.

Figure 1



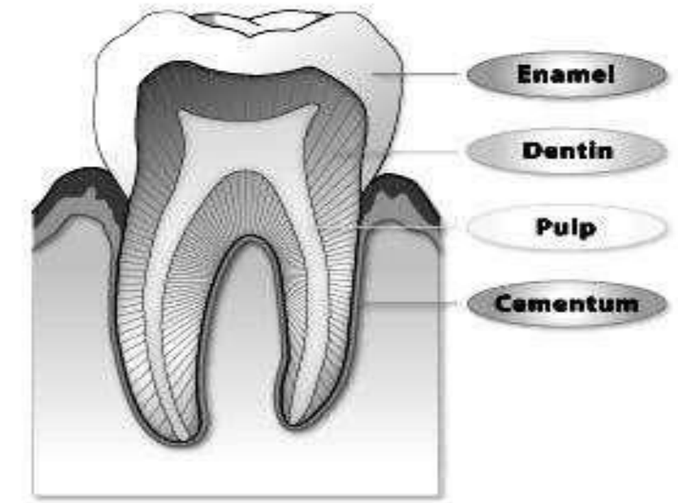
Anatomical crown and Clinical crown

Anatomical crown: is the portion of the tooth which is covered by enamel.

Clinical crown: is the portion of the tooth which is visible in the mouth.

In healthy person, the anatomical crown is longer than the clinical crown.

Figure 2



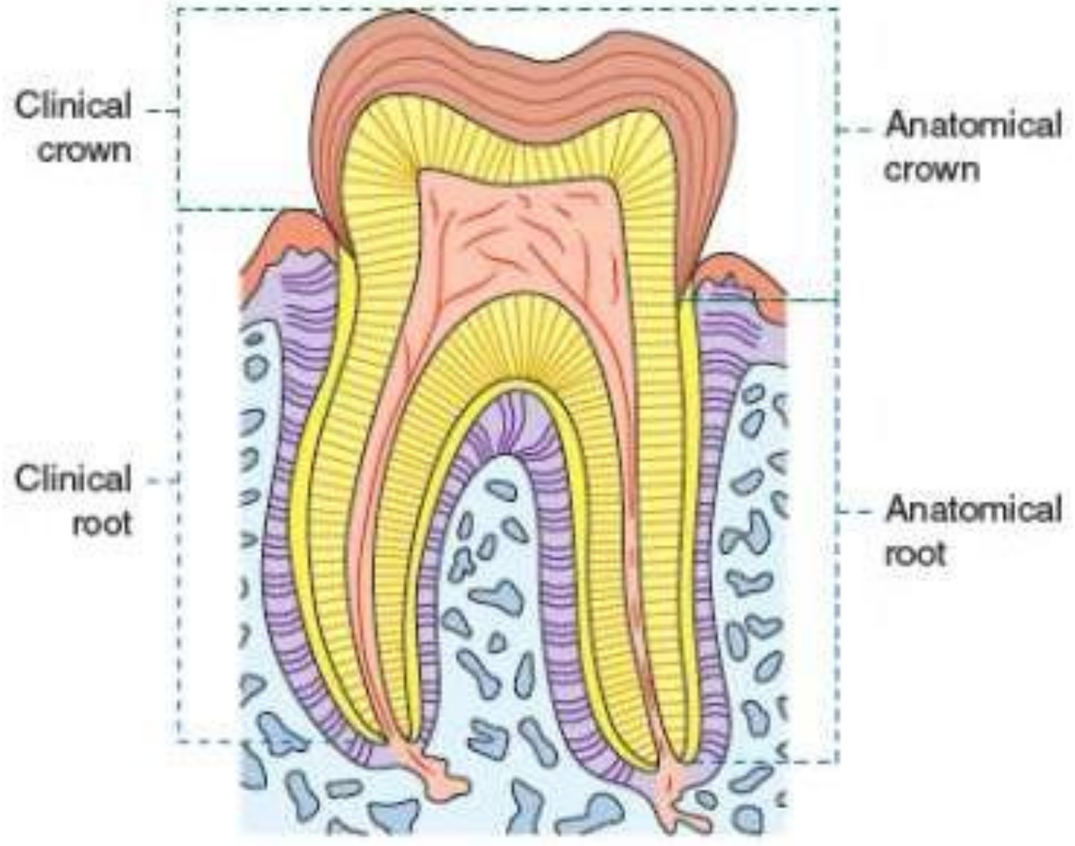
Anatomic Root and Clinical Root

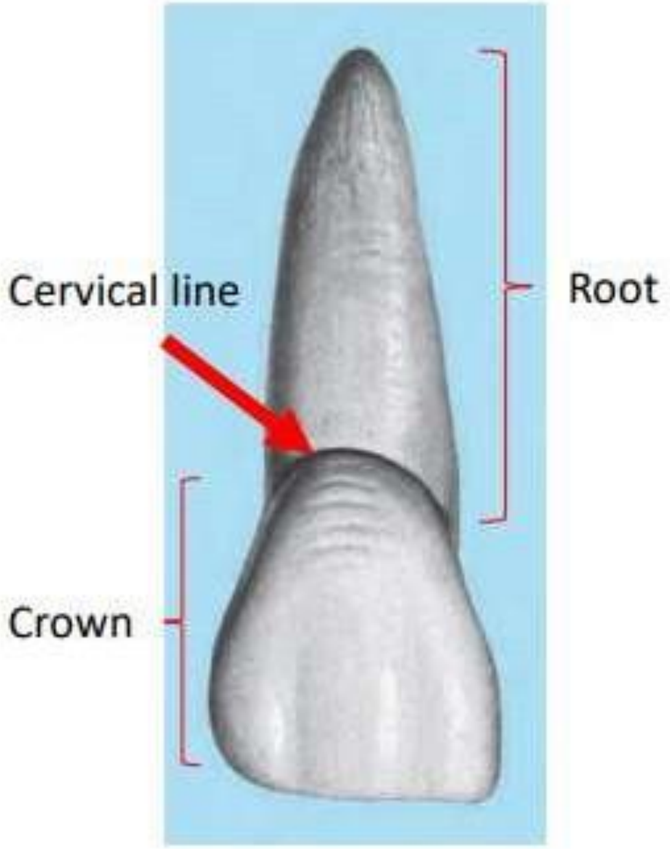
Anatomic root: is the part of a tooth that has a cementum surface.

Clinical root is that part of a tooth which is under the gingiva and is not exposed to the oral cavity; it may be longer or shorter than the anatomic root.

The number of roots:

1. **Single root:** in all anterior teeth, mandibular premolars and maxillary second premolar.
2. **Two roots with bifurcation:** in mandibular molars and maxillary first premolar.
3. **Three roots with trifurcation:** in maxillary molars.

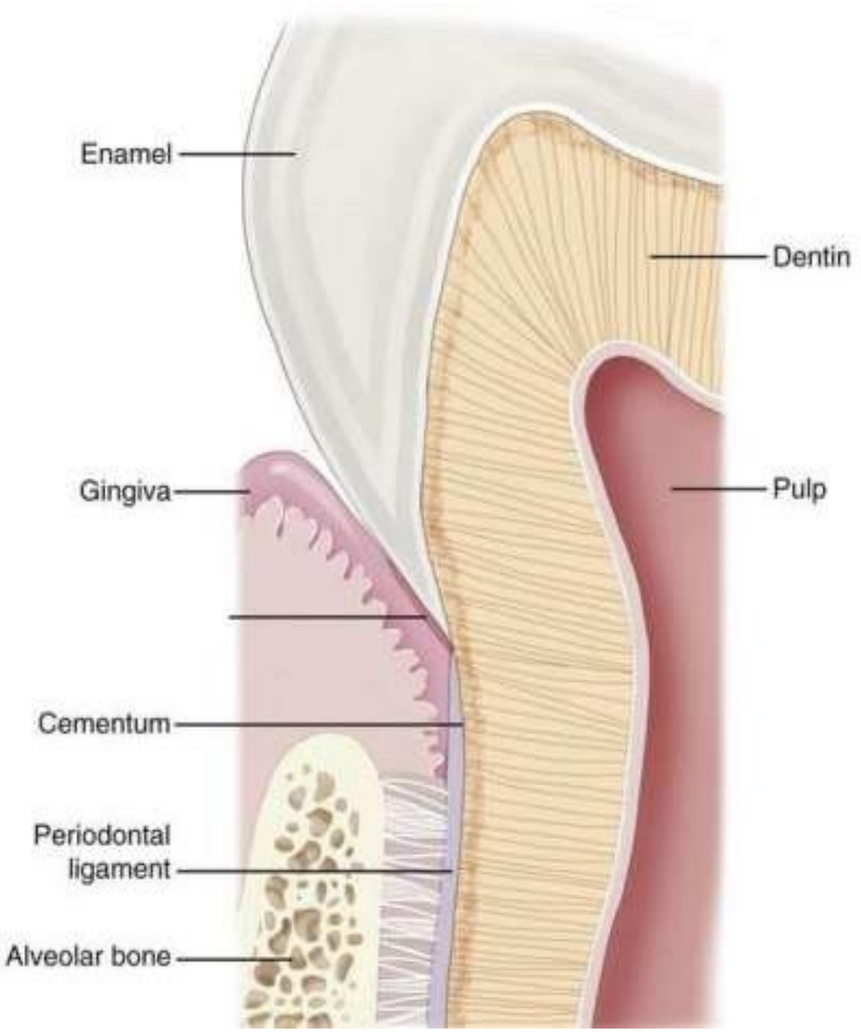

Clinical crown
Anatomical crown
Clinical root
Anatomical root


Cervical line
Root
Crown

Dental pulp: is the soft tissue of the tooth and present in the pulp chamber and pulp canal.

Pulp chamber: is the part of dental pulp in the crown.

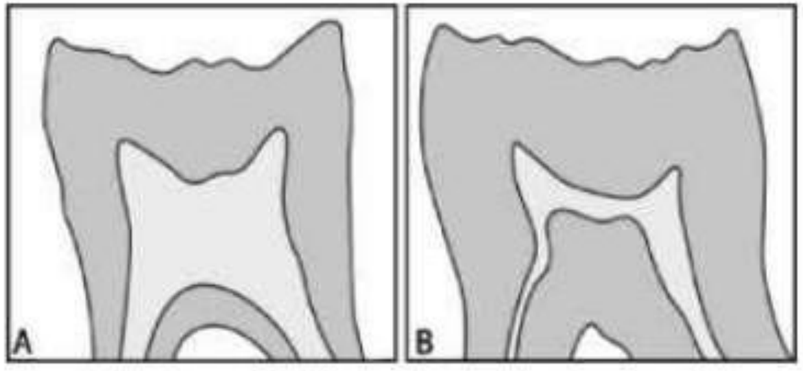
Pulp canal: is the part of dental pulp in the root.



The Pulp

- When the tooth is newly erupted, the dental pulp is large
- it becomes progressively smaller as the tooth ages.
- The pulp is relatively large in primary teeth and also in young permanent teeth





Surfaces and Ridges

The crowns of incisors and canines have 4 surfaces and a ridge and the crowns of the premolars and molars have 5 surfaces.

The surfaces are:

1. **Labial surface:** is the surface which is towards the lip in incisors and canines (= in anterior teeth).
2. **Buccal surface:** is the surface which is towards the cheek in premolars and molars (= in posterior teeth).

The labial and buccal surfaces could be termed as the "Facial" surfaces.

3. **Lingual surface:** is the surface which is facing the tongue (all teeth).
4. **Occlusal surface:** is the surface of the posterior teeth coming in contact with the teeth in the opposite jaw during closing the mouth.

In anterior teeth, this surface is called "**Incisal ridge**".

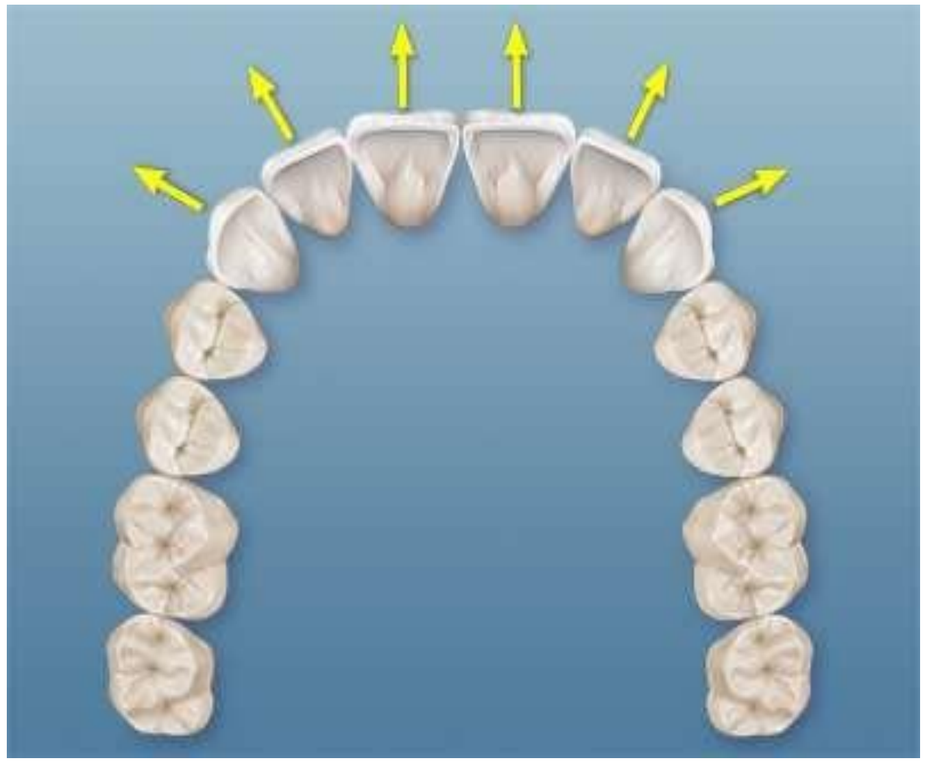
5. **Proximal surface:** is the surface of the tooth facing towards adjacent teeth in the same dental arch.

a. **Mesial surface:** is the surface which is facing towards the median line.

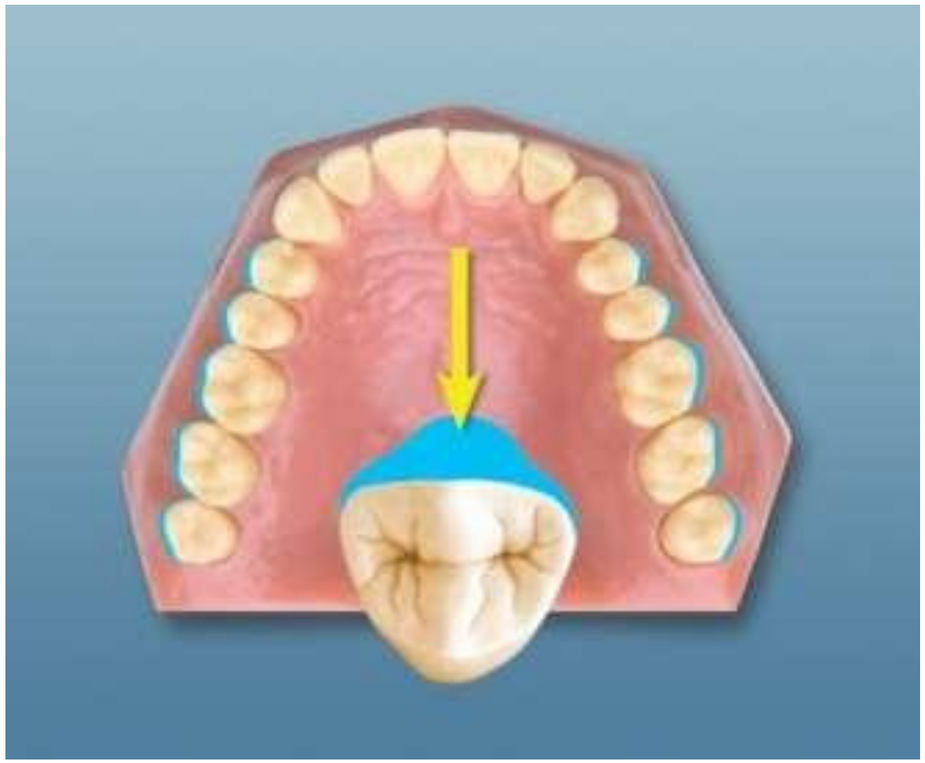
b. **Distal surface:** is the surface which is facing away from the median line.

Facial Surface

Labial

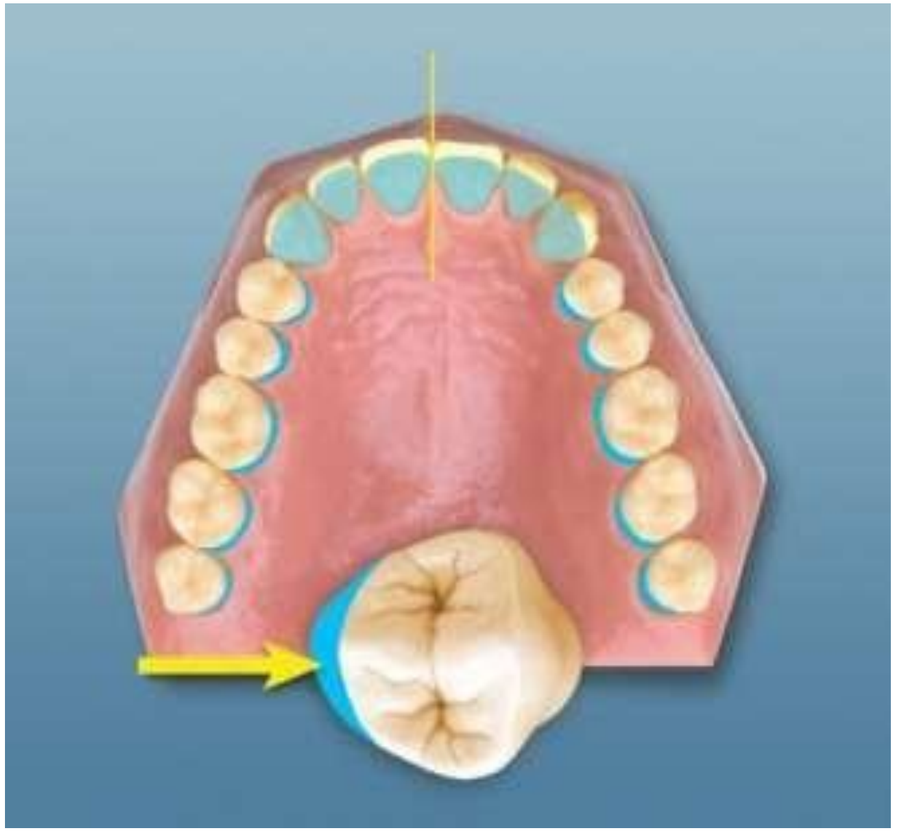


Buccal



2. Lingual-Palatal Surface

Palatal: the surface of a tooth is directed toward the palate.



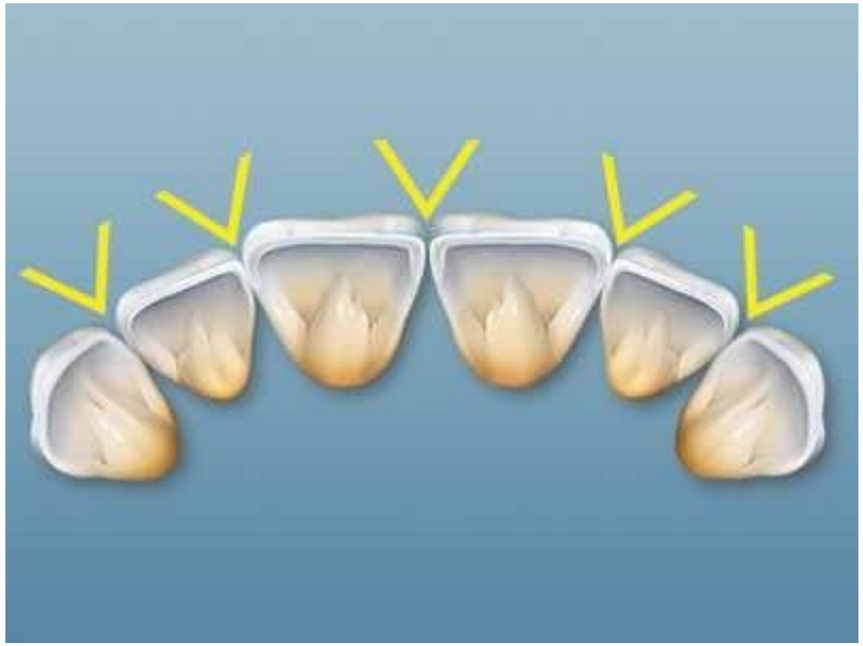
2. Lingual Surface

Lingual: The surface of a tooth facing the tongue.



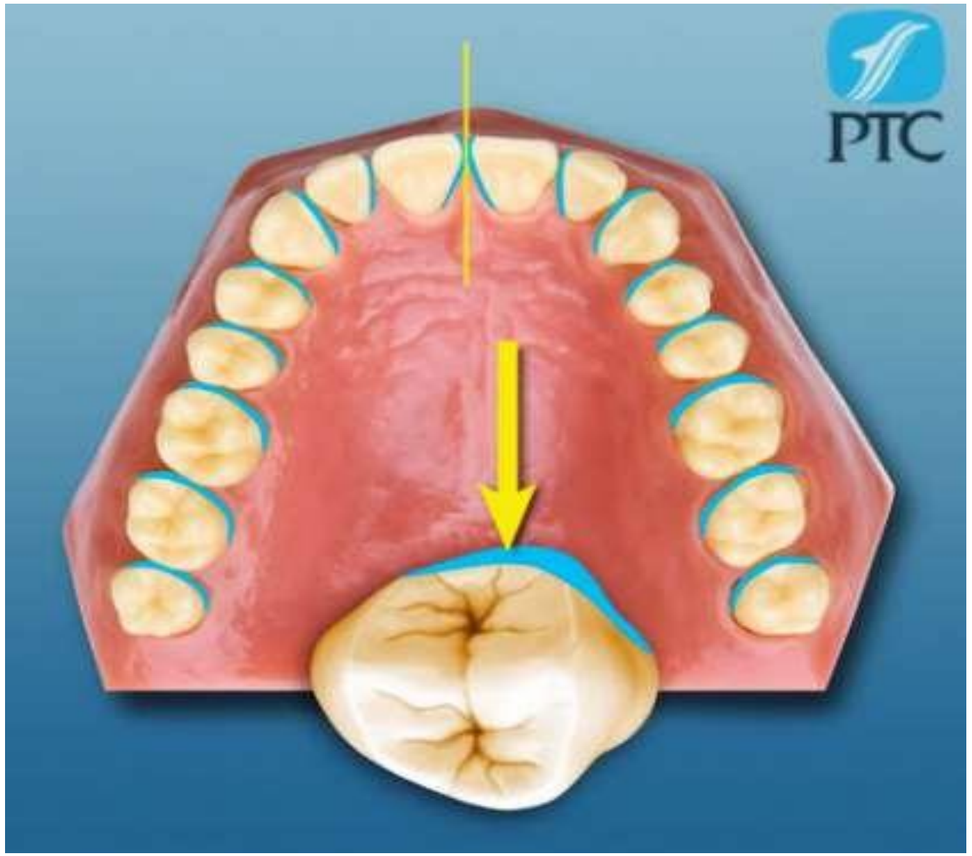
3. Proximal Surfaces

Proximal surfaces are:
mesial and distal



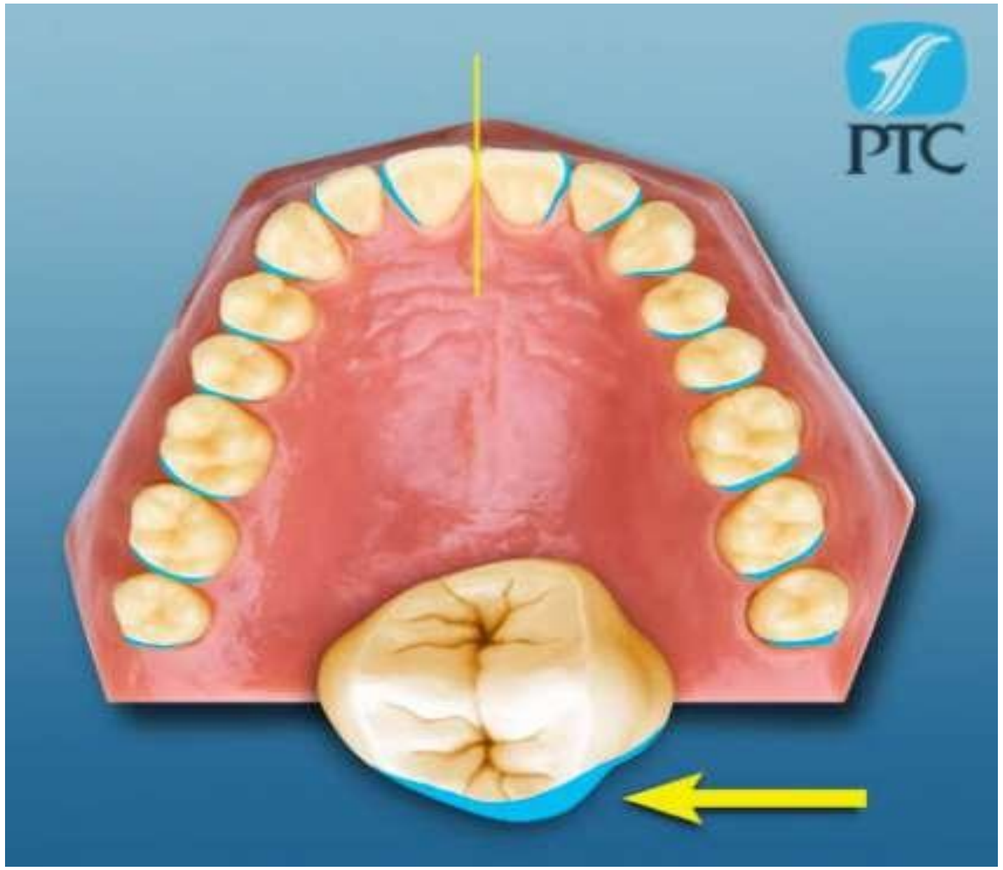
Mesial

The surface of a tooth facing the median line, following the curve of the dental arch.



Distal

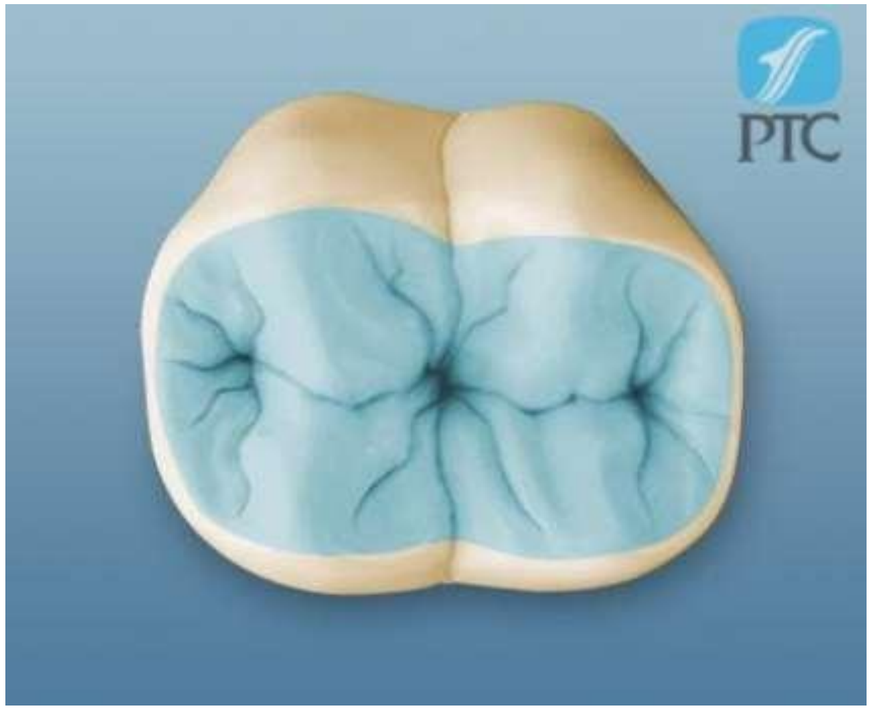
The surface of the tooth facing away from the median line, following the curve of the dental arch.



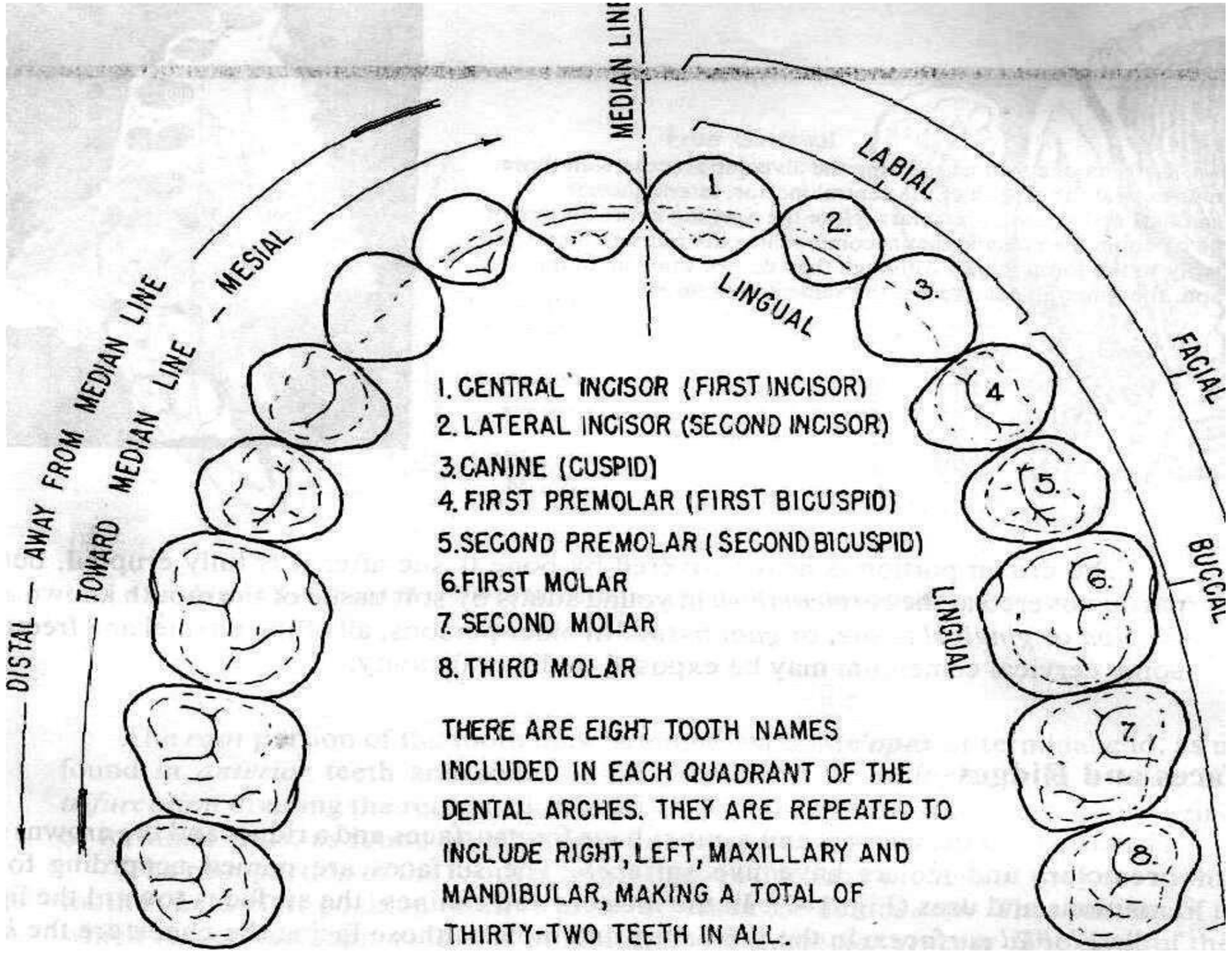
Incisal surface



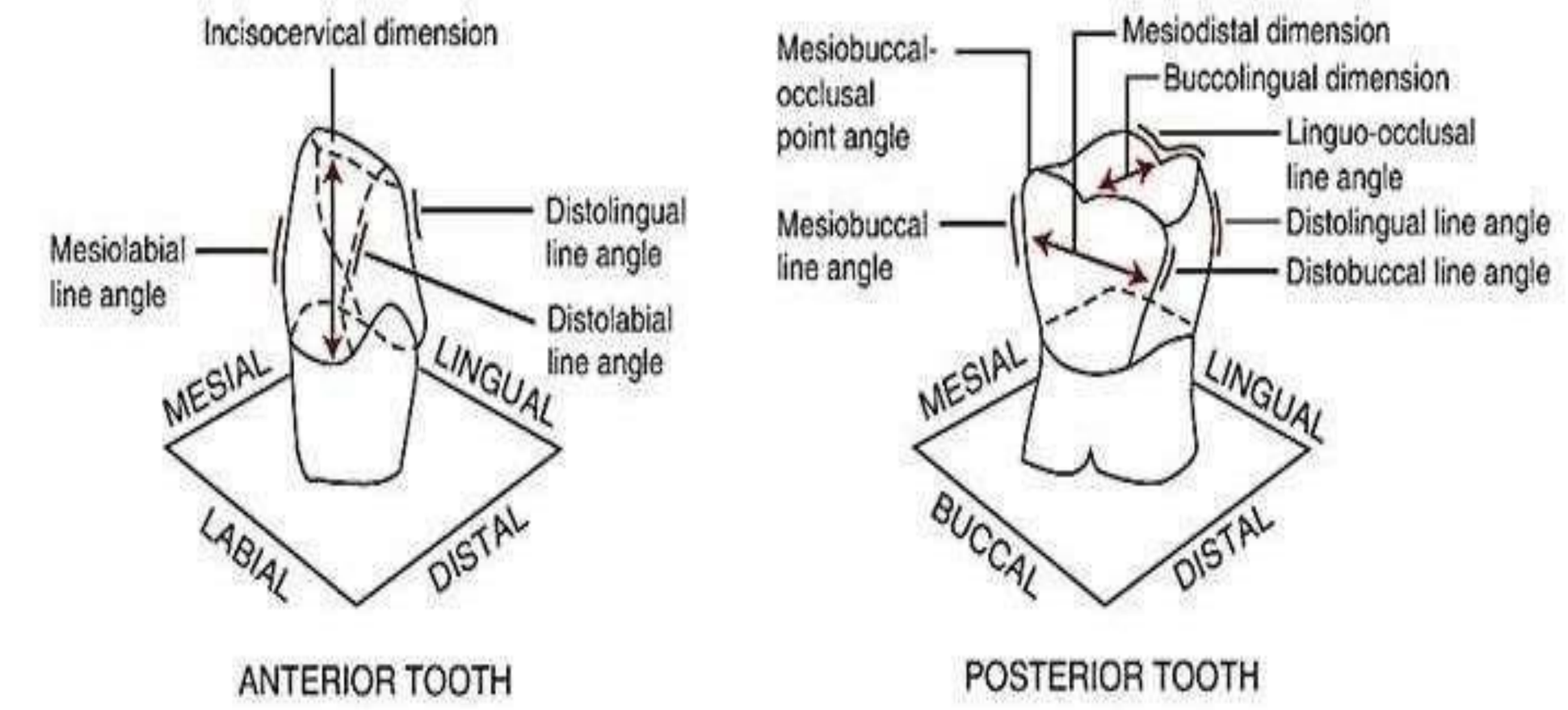
Occlusal surface



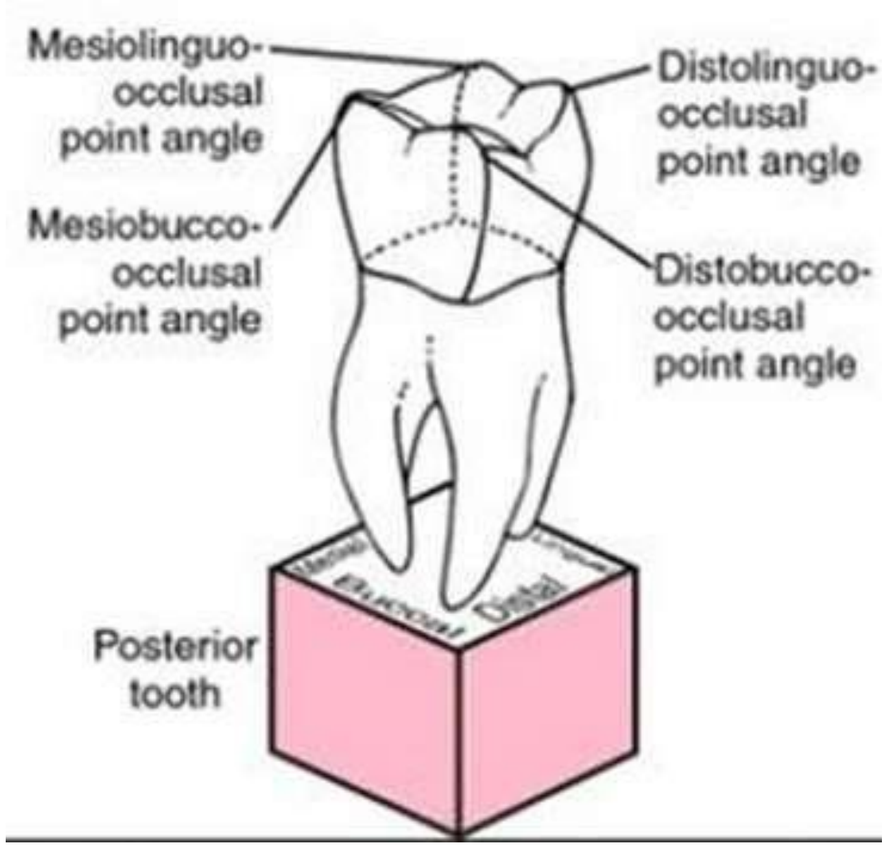
All teeth have their mesial surfaces touching the distal surfaces of the adjacent tooth except the maxillary and mandibular central incisors (both permanent and deciduous).

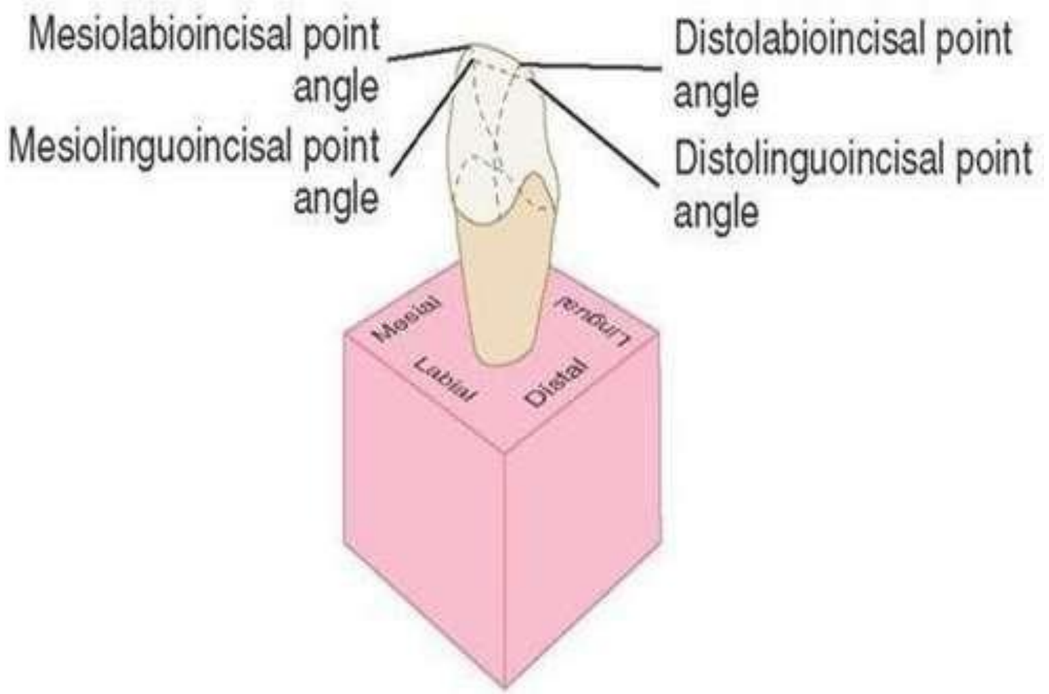


Line angle: it is formed by the junction of two surfaces and gets its name from these surfaces. Example: mesio-labial line angle.



Point angle: it is formed by the junction of 3 surfaces and gets its name from these surfaces. Example: mesio-linguo-incisal point angle.





Division of the crown into thirds:

For description, the crown and the root are divided into thirds according to the position of the surface.

