



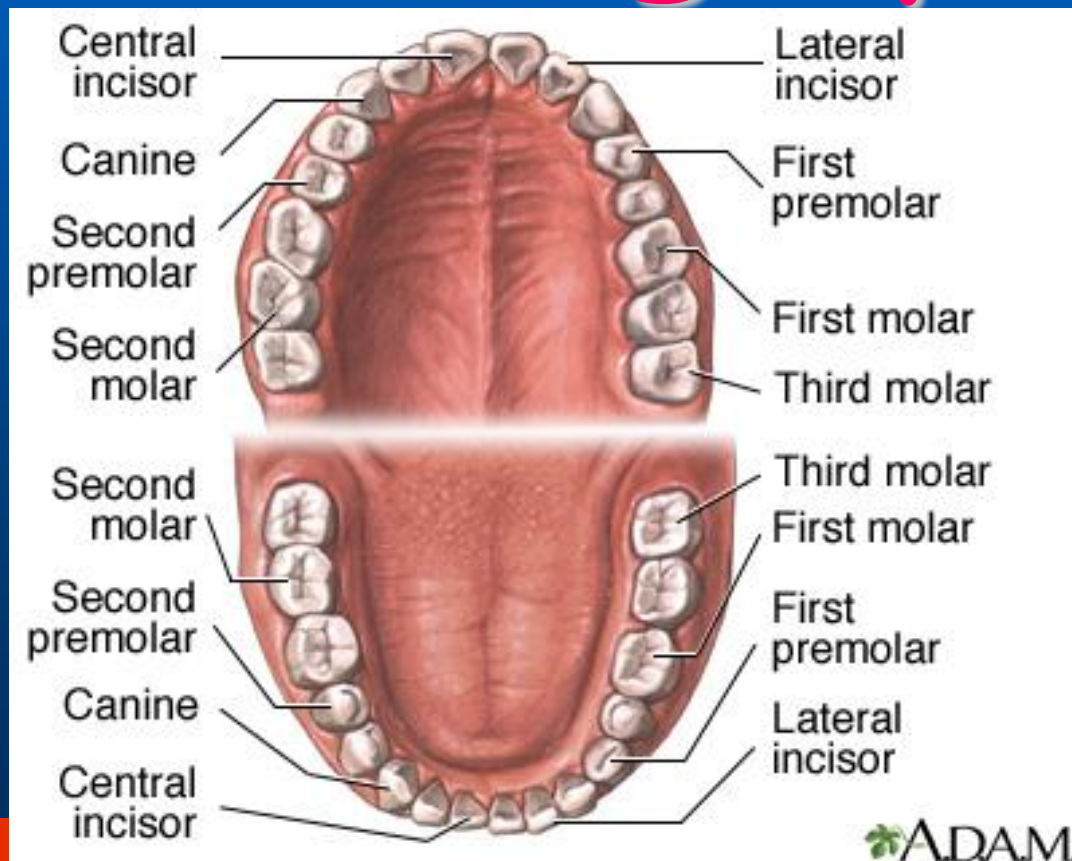
# Tooth classification & numbering systems

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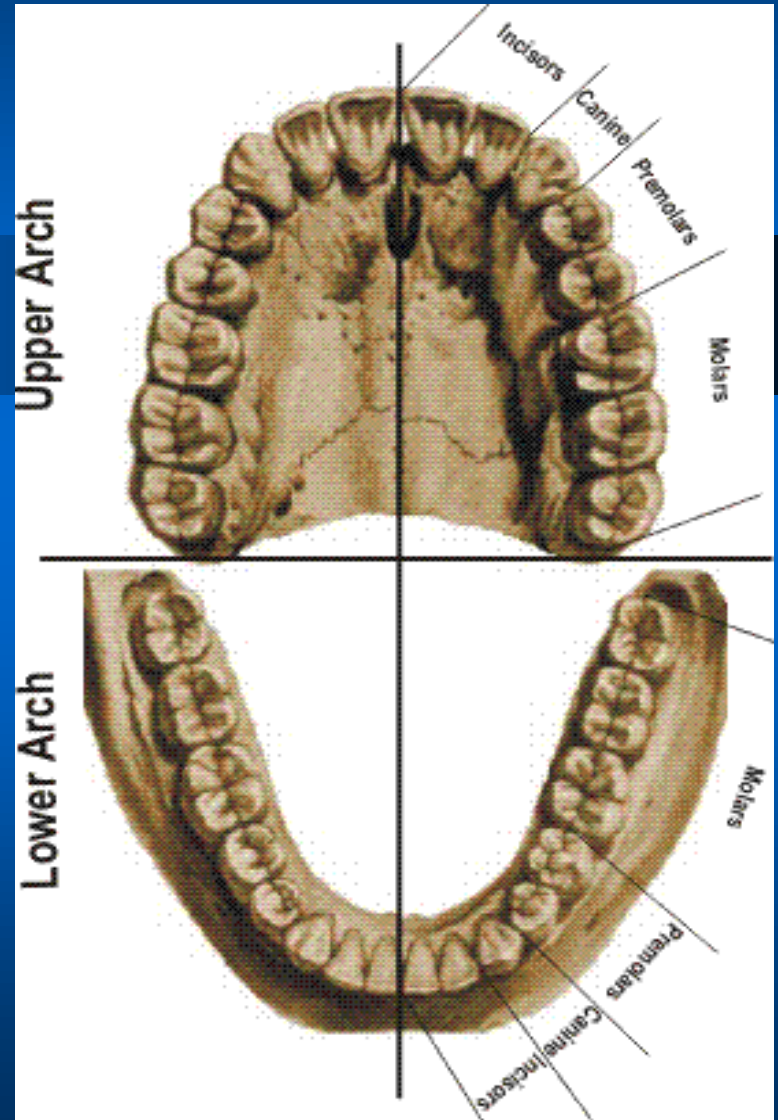
**Dr. Reda Gaber**

**Associate Professor of Oral Biology  
Faculty of Dentistry**

# Tooth classification & numbering systems

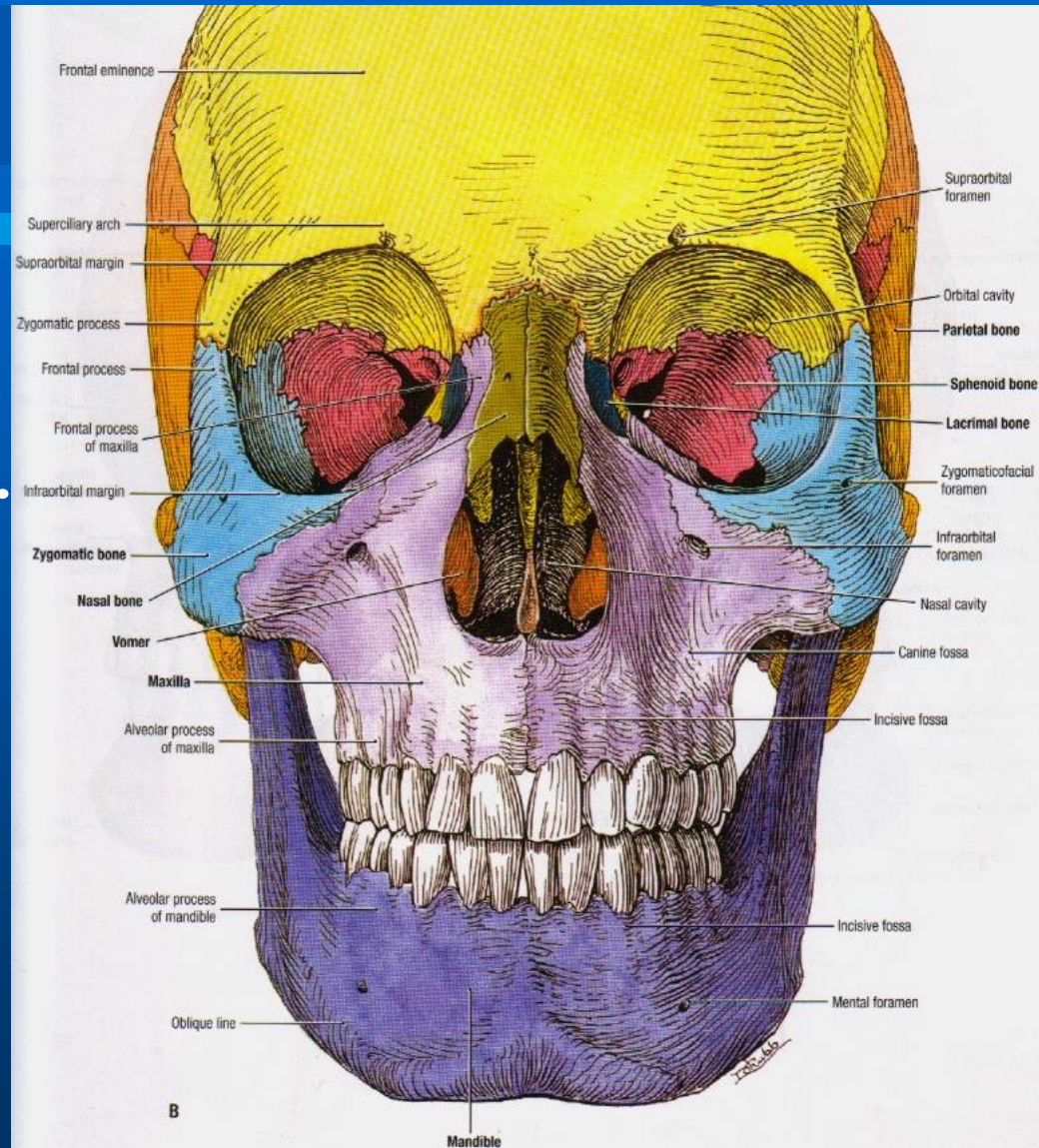


# The Jaws & Dental Arches



# The Jaws and Dental Arches

- **A. The maxilla** is two bones forming the upper jaw; they are rigidly attached to the skull.
- **B. The mandible** is a horse-shoe shaped bone which articulates with the skull by way of the temporo-mandibular joint the TMJ.

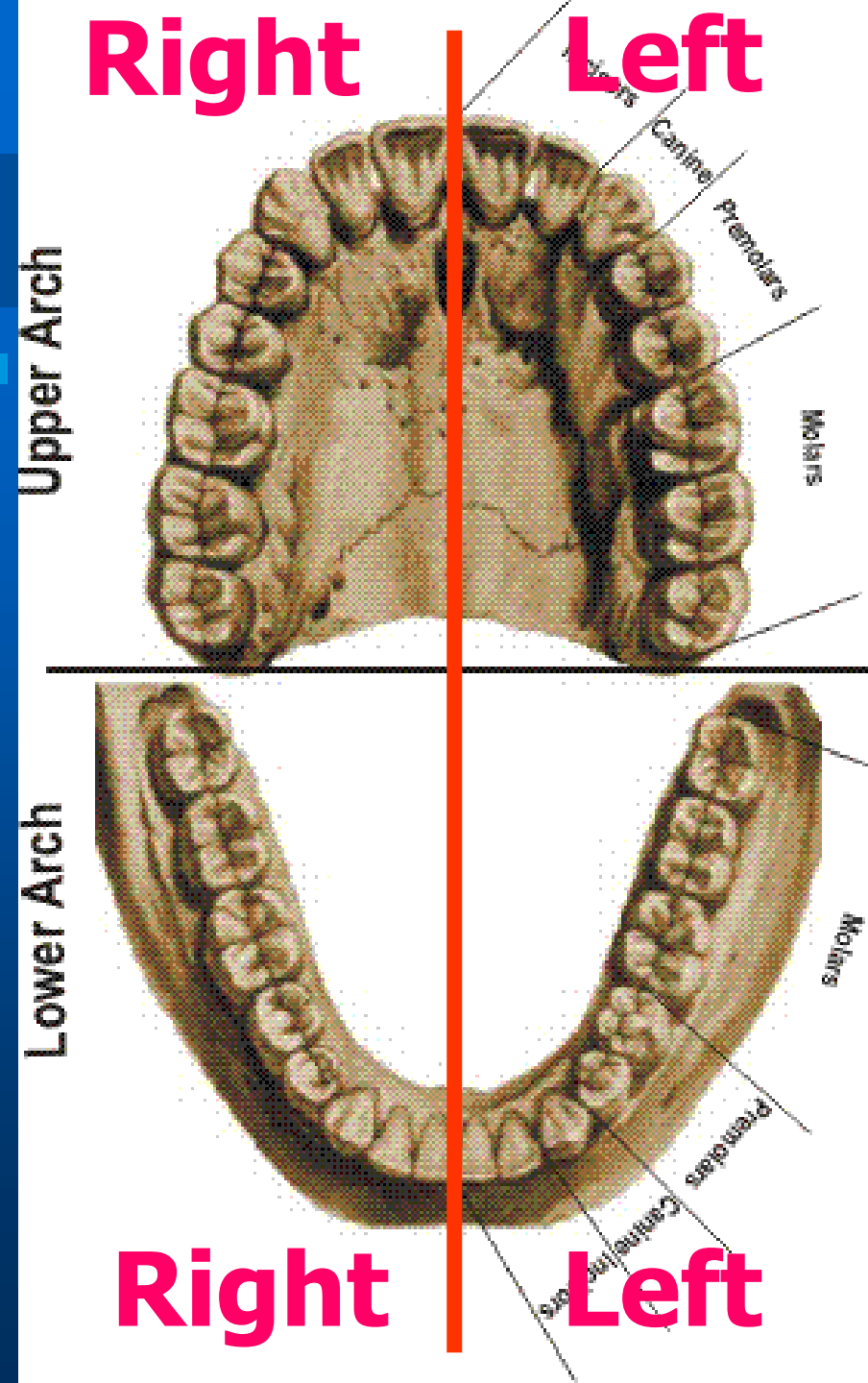


# Quadrants: right & left quadrants

Maxillary right  
and left.

Mandibular right  
and left.

4 Quadrants



# Types of Teeth

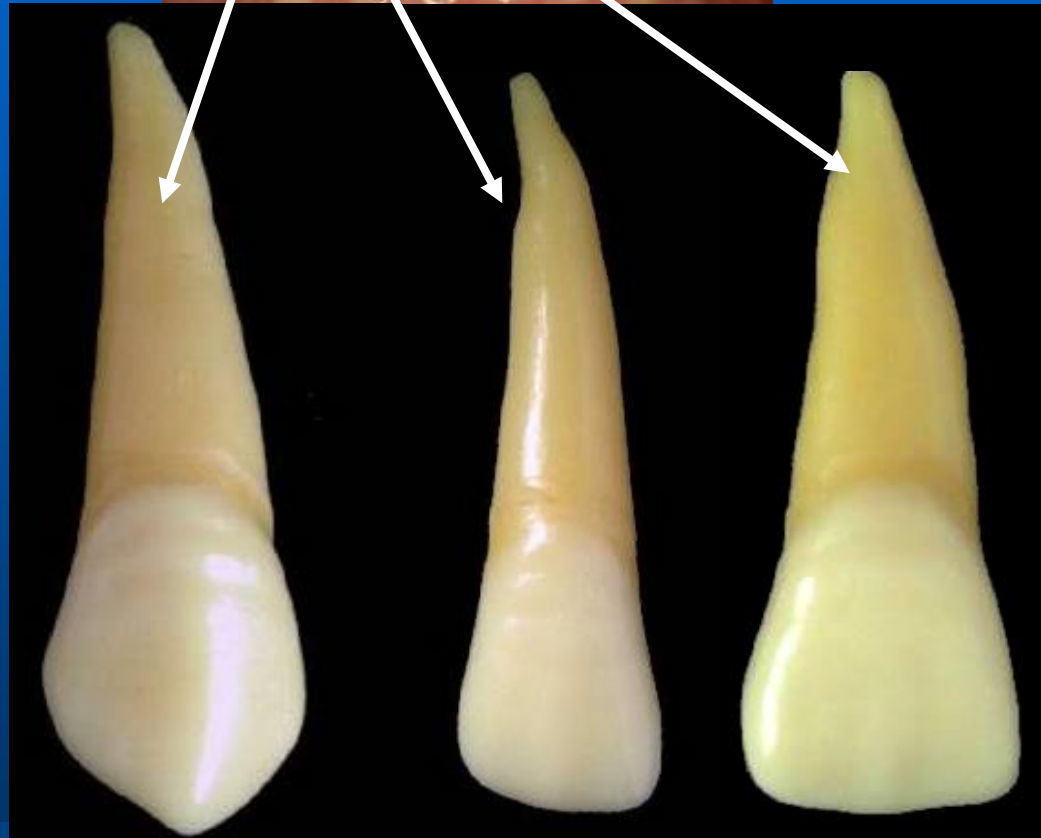


**Anterior Teeth**  
for  
cutting & tearing  
food

**Posterior Teeth**  
Tearing & grinding  
food



# Anterior Teeth - Upper



Canine

lateral

Central

Incisors

# Anterior Teeth - Lower

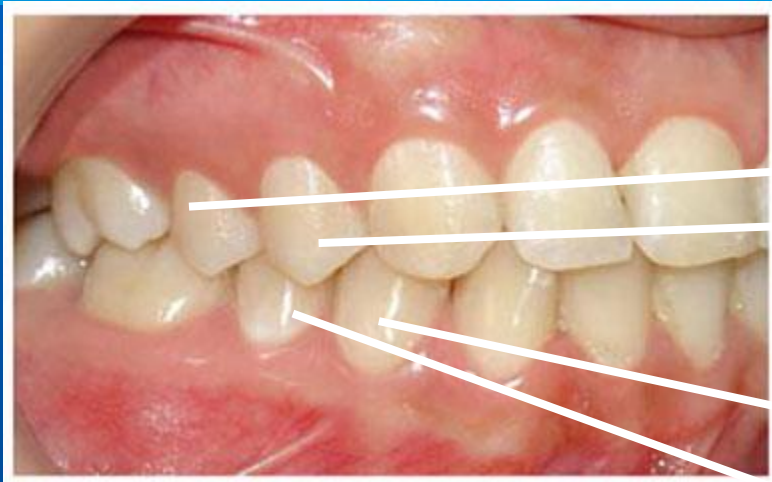


Canine

lateral - Central  
Incisors



# Premolars: (in permanent only)



Upper

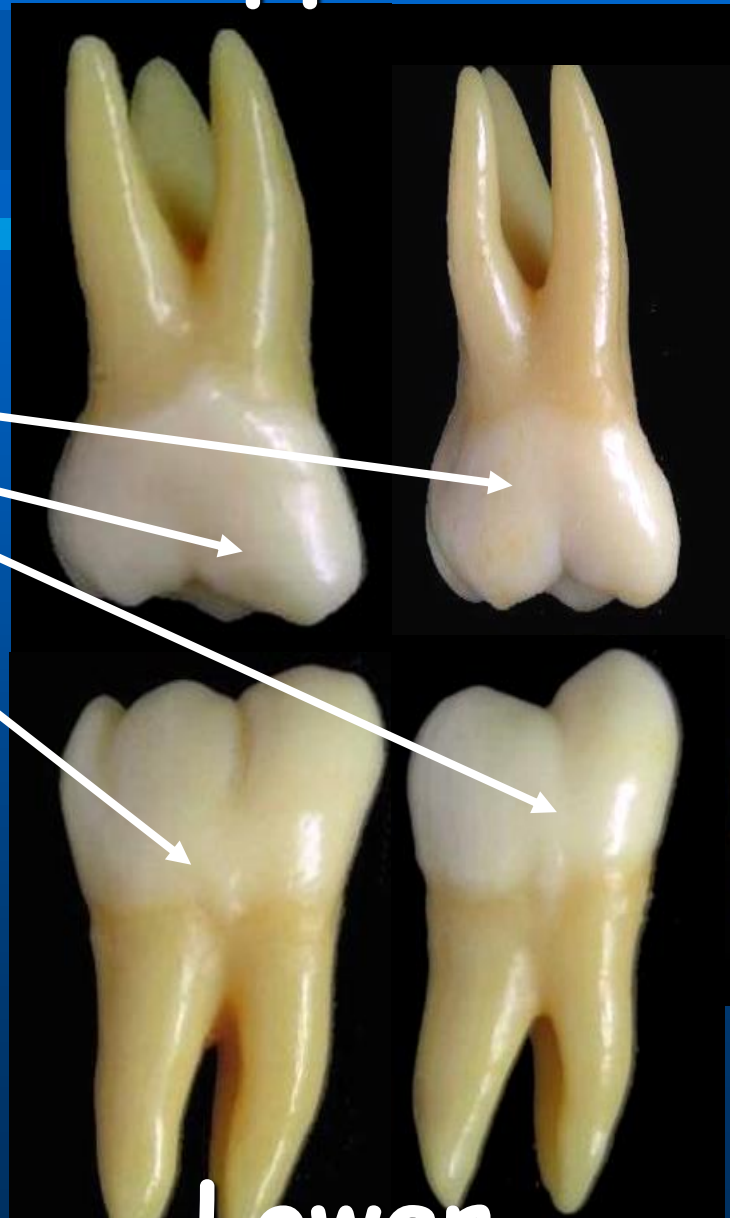


First premolar  
&  
Second premolar

Lower

# Molars:

Upper

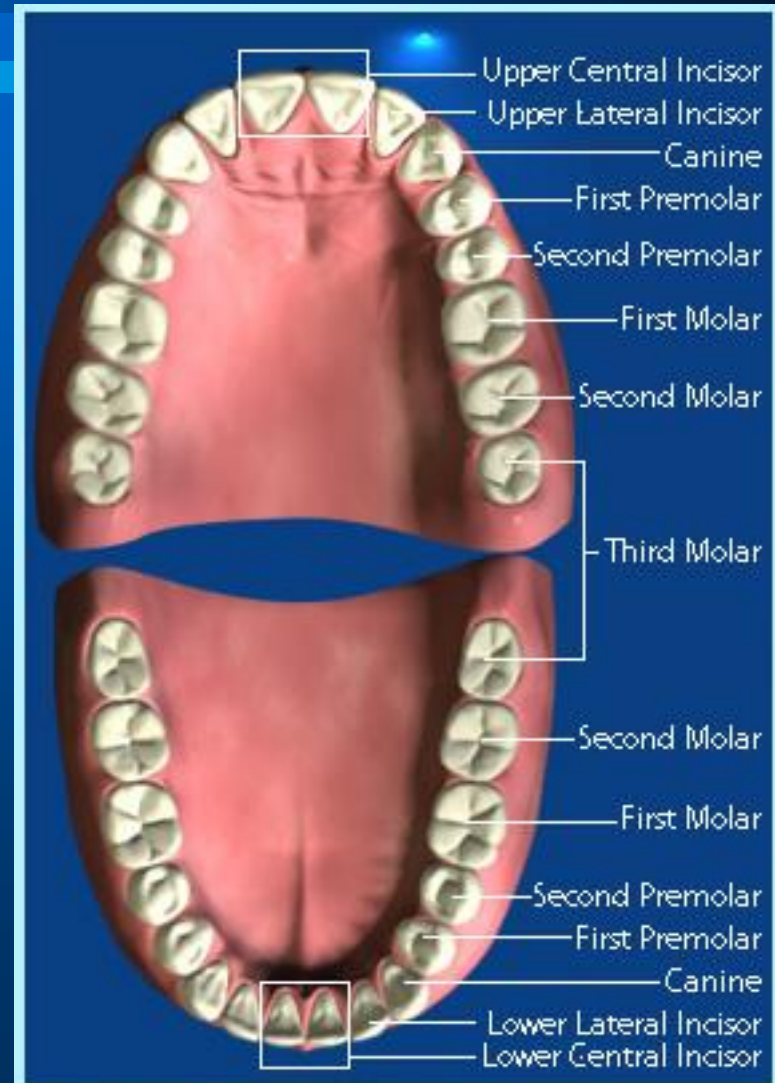
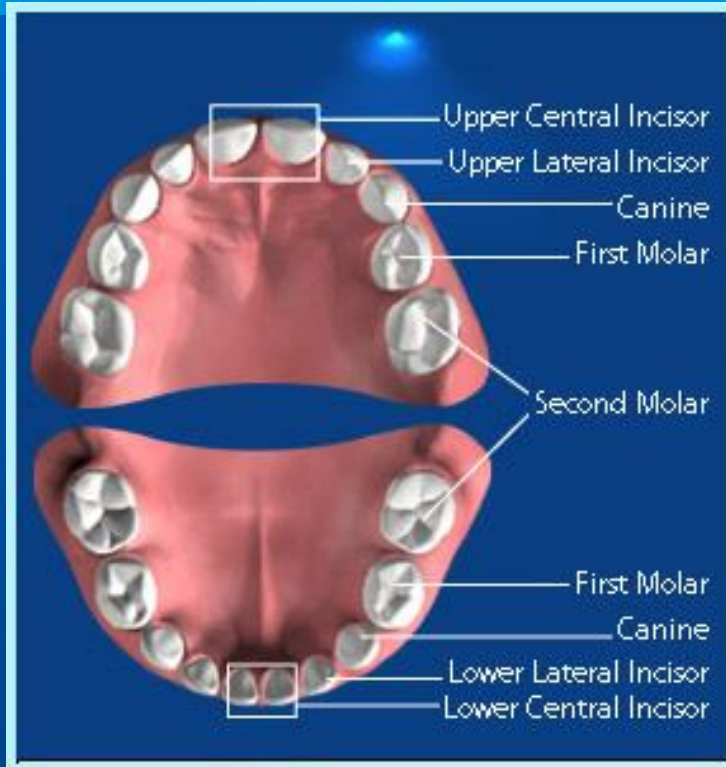


First & second

Wisdom tooth =  
Third permanent molar

Lower

# Types of Dentitions: Primary & Permanent Dentition



# Types of Dentitions:

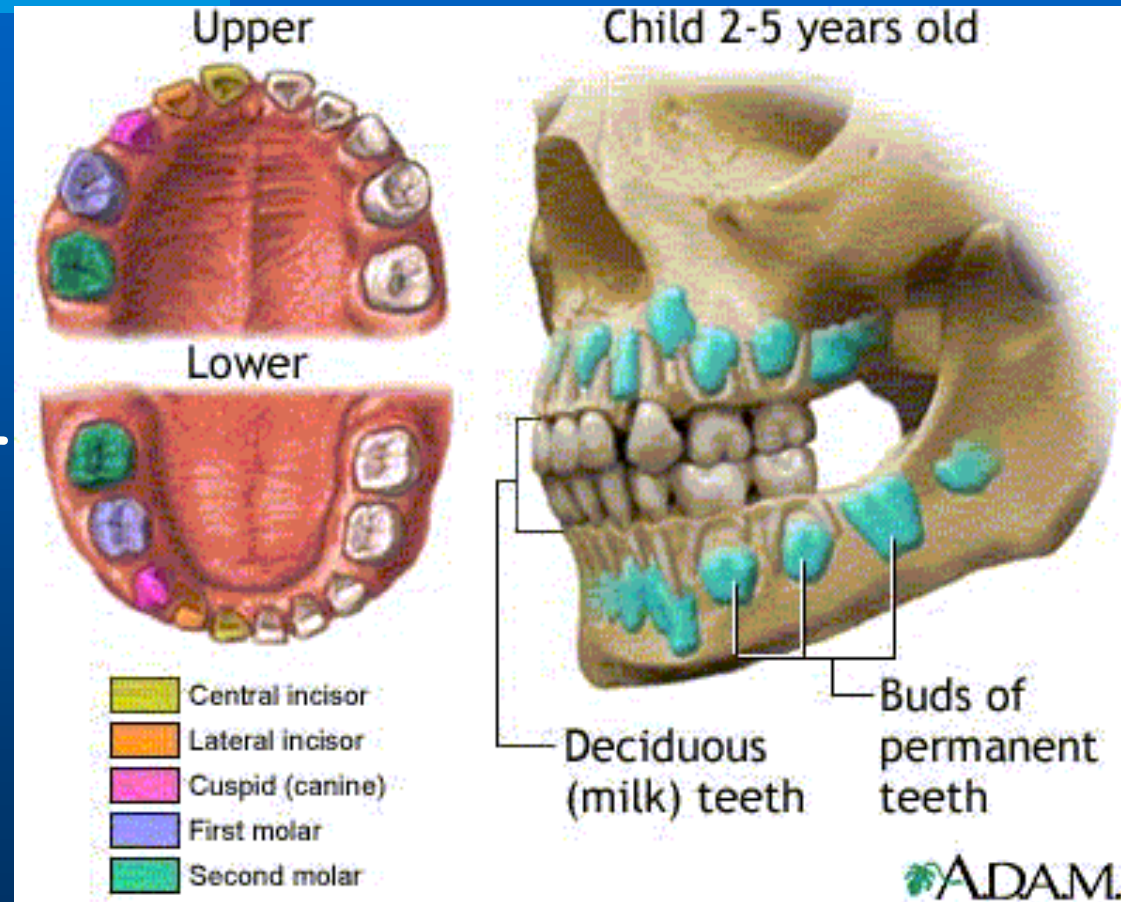
## I-Primary Dentition

Deciduous ,baby, milk teeth:

- Twenty ( 20) primary teeth.
- 10 in each arch
- 5 in each quadrant

In function:

2 years ⇔ 12 years



# I-Primary Dentition





# Mixed Dentition Period

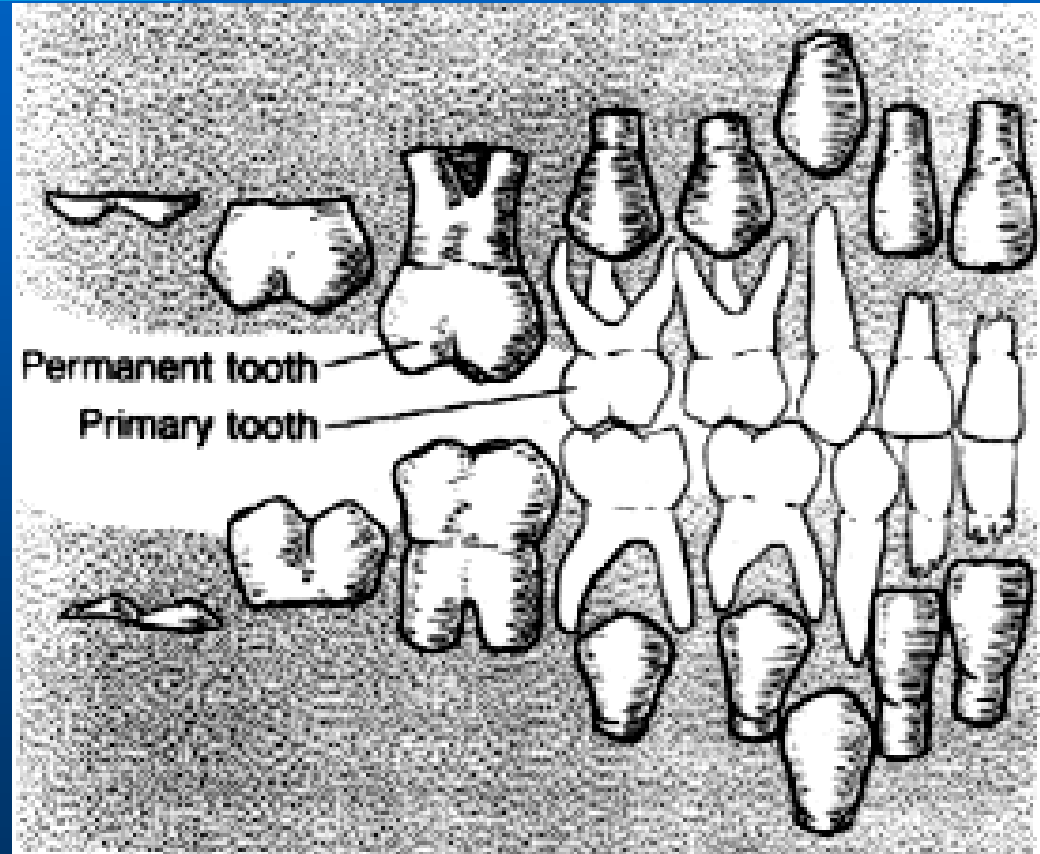
6 years → 12 years



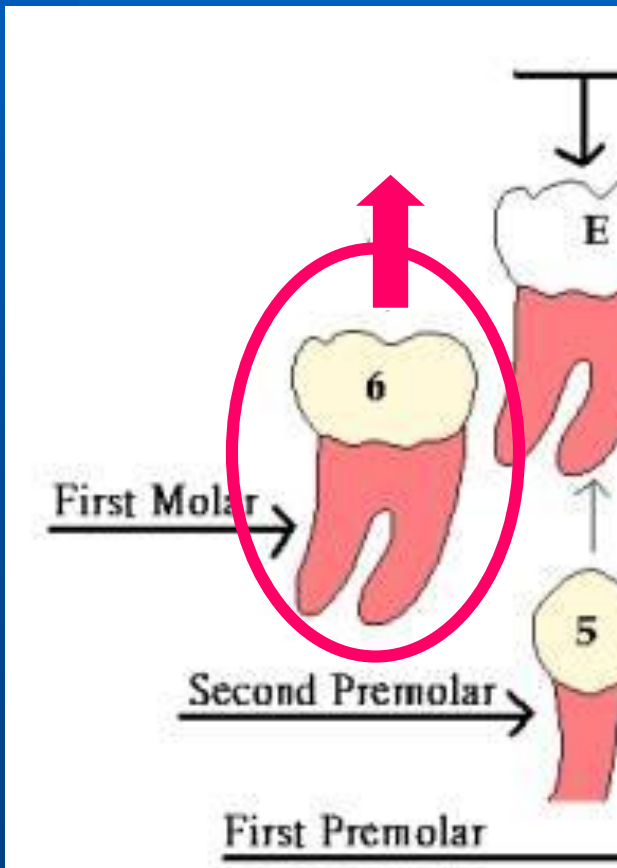
Eruption  
of  
first  
permanent  
molar



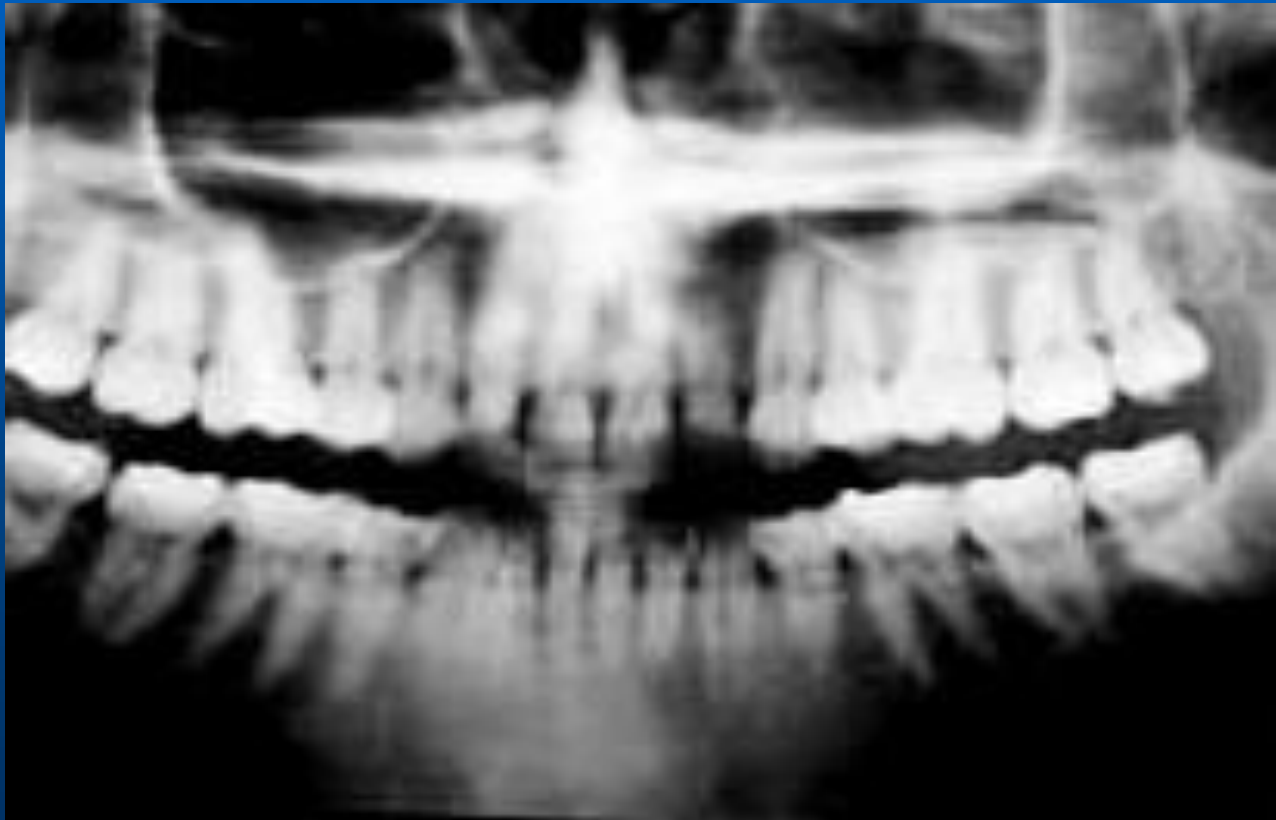
Shedding  
of  
last  
primary  
molar



6 years ⇒ eruption of first permanent molar



12 years ⇒ Shedding of last primary molar





# II-Permanent Dentition

In  
function:  
12 years











through  
out  
life

Upper

Lower

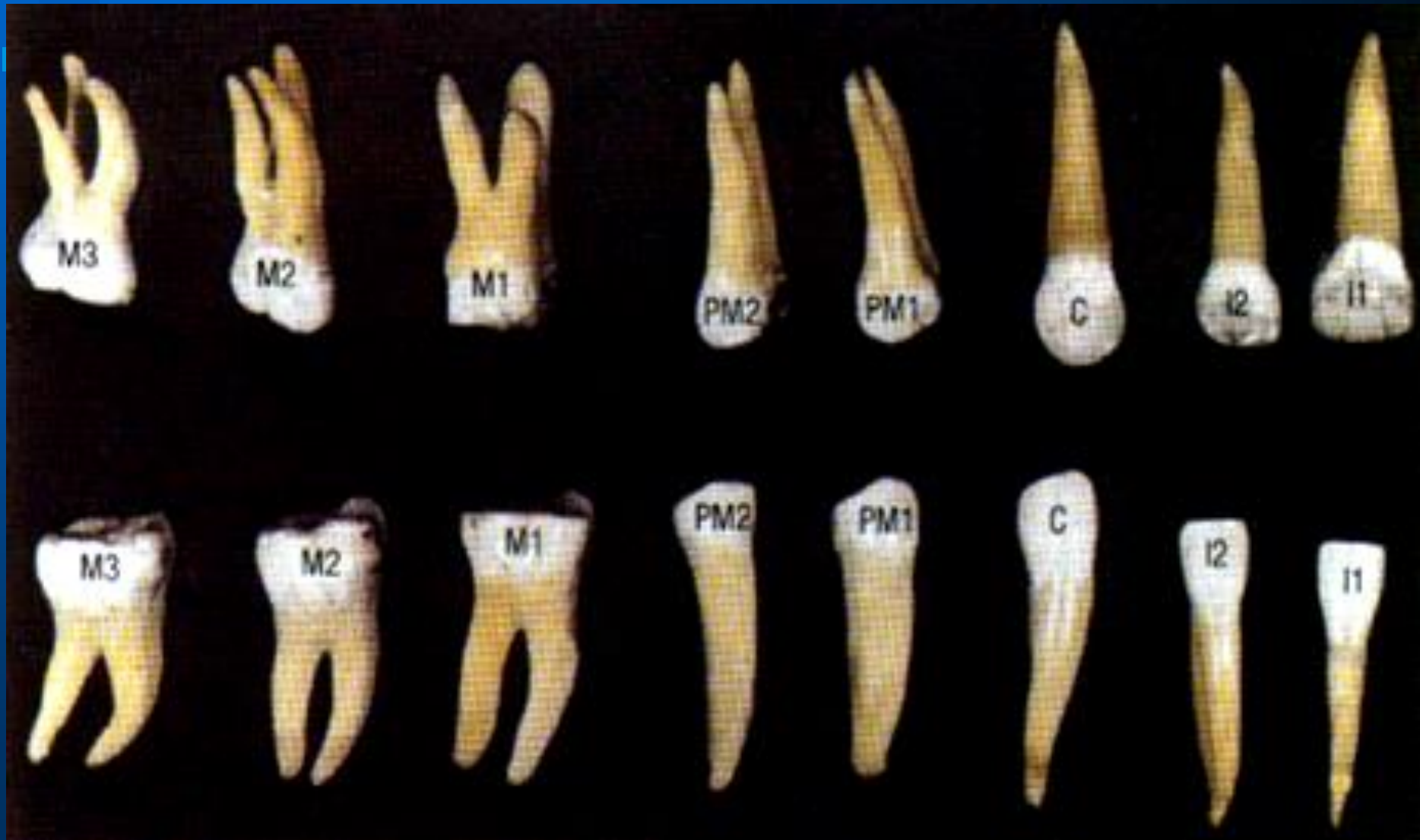
Adult 21-25 years old

Permanent (adult) teeth

 Central incisor	 Second premolar (bicuspid)
 Lateral incisor	 First molar
 Cuspid (canine)	 Second molar
 First premolar (bicuspid)	 Third molar

J.M.

# Permanent Teeth



# The Dentitions

Humans have two dentitions

## 1-The primary dentition: (deciduous )

20 teeth. 10 maxillary and 10 mandibular.

5 teeth are present in each quadrant.

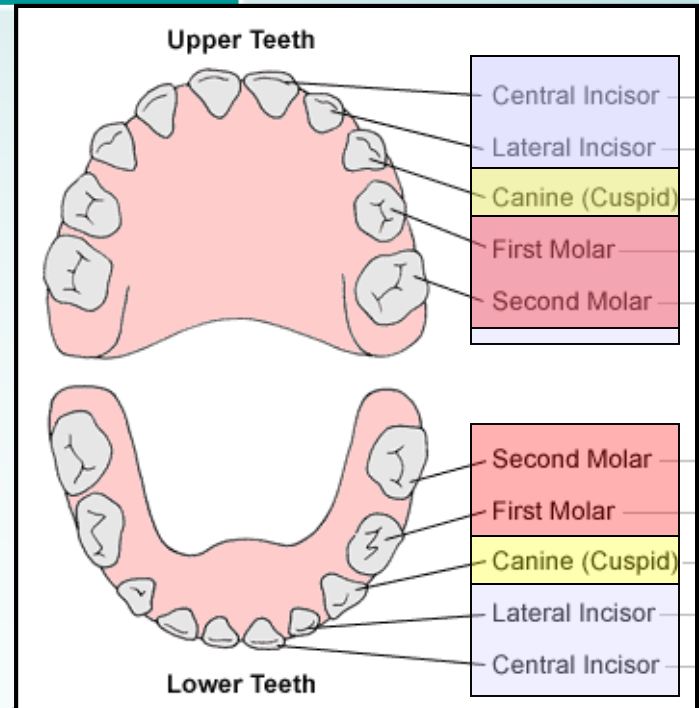
2 incisors.

1 canine.

and 2 molars.

**The dental formula is:**

$$\begin{array}{cccc}
 2 & 1 & 2 & \\
 I & C & M & = 10 \\
 2 & 1 & 2 & 
 \end{array}$$



# The Dentitions

## 2-The permanent dentition: (secondary, adult or succedaneous )

32 teeth, 16 maxillary and 16 mandibular.

8 teeth in each quadrant are Present.

2 incisors.

1 canine.

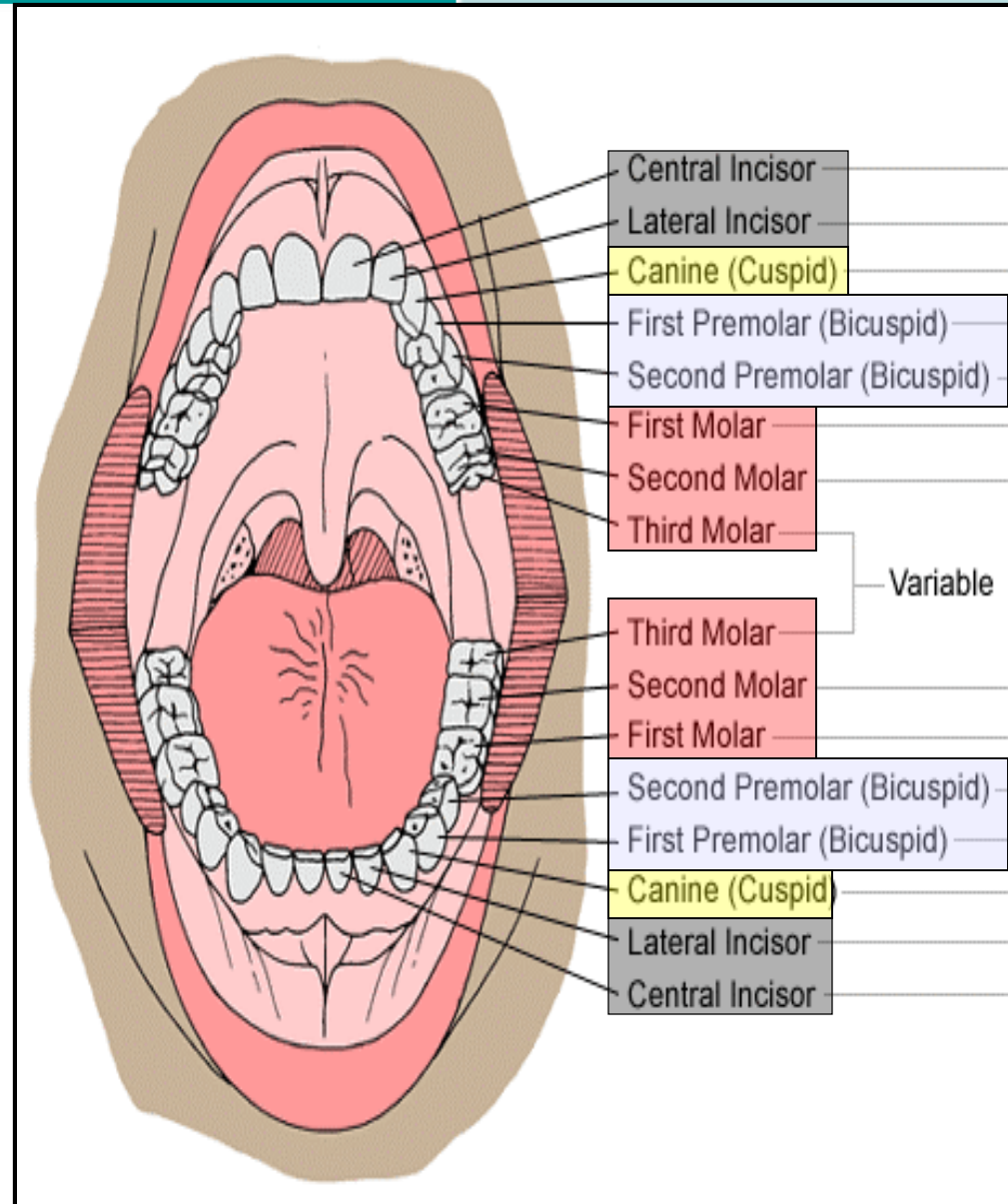
2 premolars.

and 3 molars.

## The dental formula is :

$$\begin{array}{ccccccc}
 2 & 1 & 2 & 3 & & & \\
 I & - & C & - & PM & - & M & - & = & 16 \\
 2 & 1 & 2 & 3 & & & & & & 
 \end{array}$$

The *permanent molars* are not preceded with deciduous teeth so they may be termed as *non-succedaneous teeth*.



لغز معقد جدا  
صحح هذه المعادلة  
بتحرك عود  
ثقاب واحد فقط؟



11K

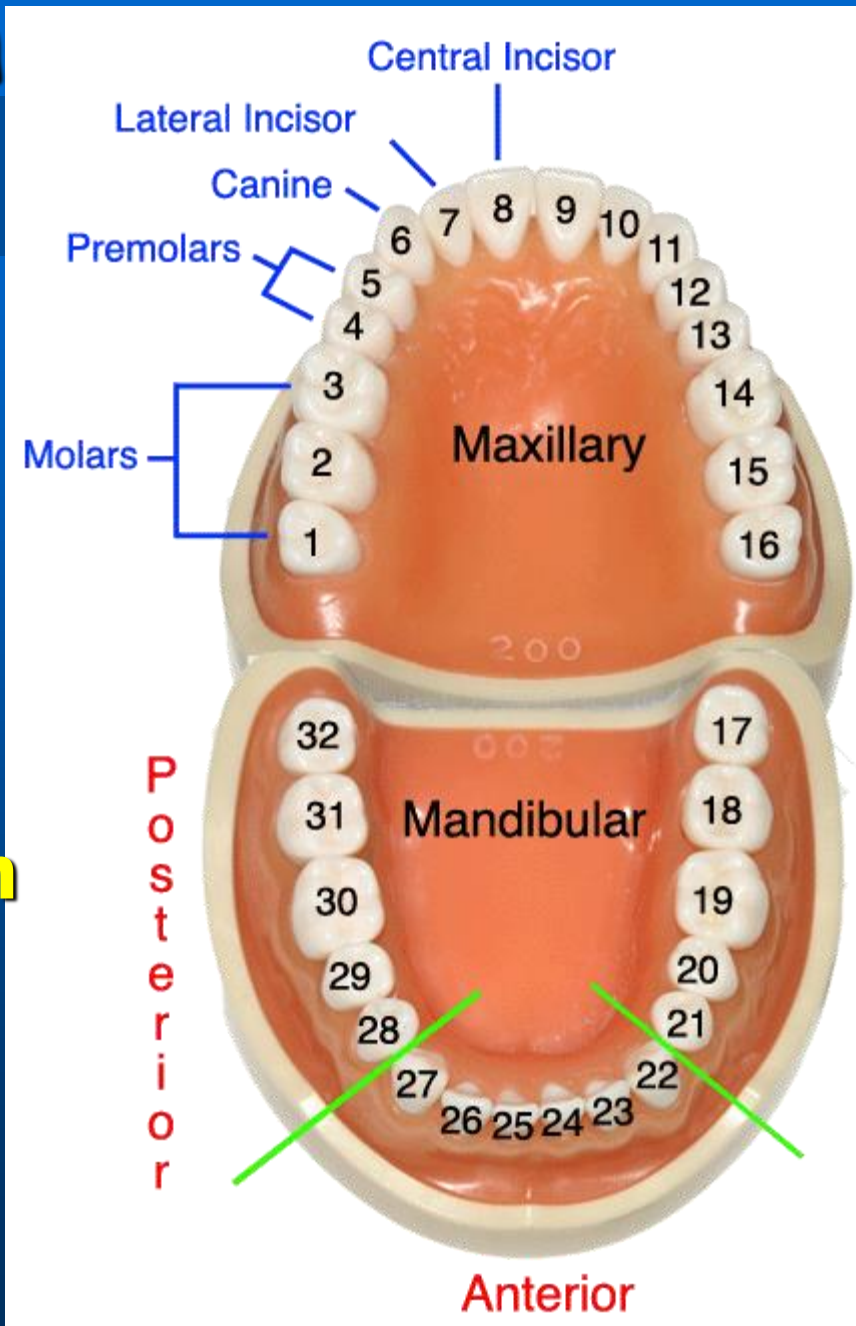


Dialko

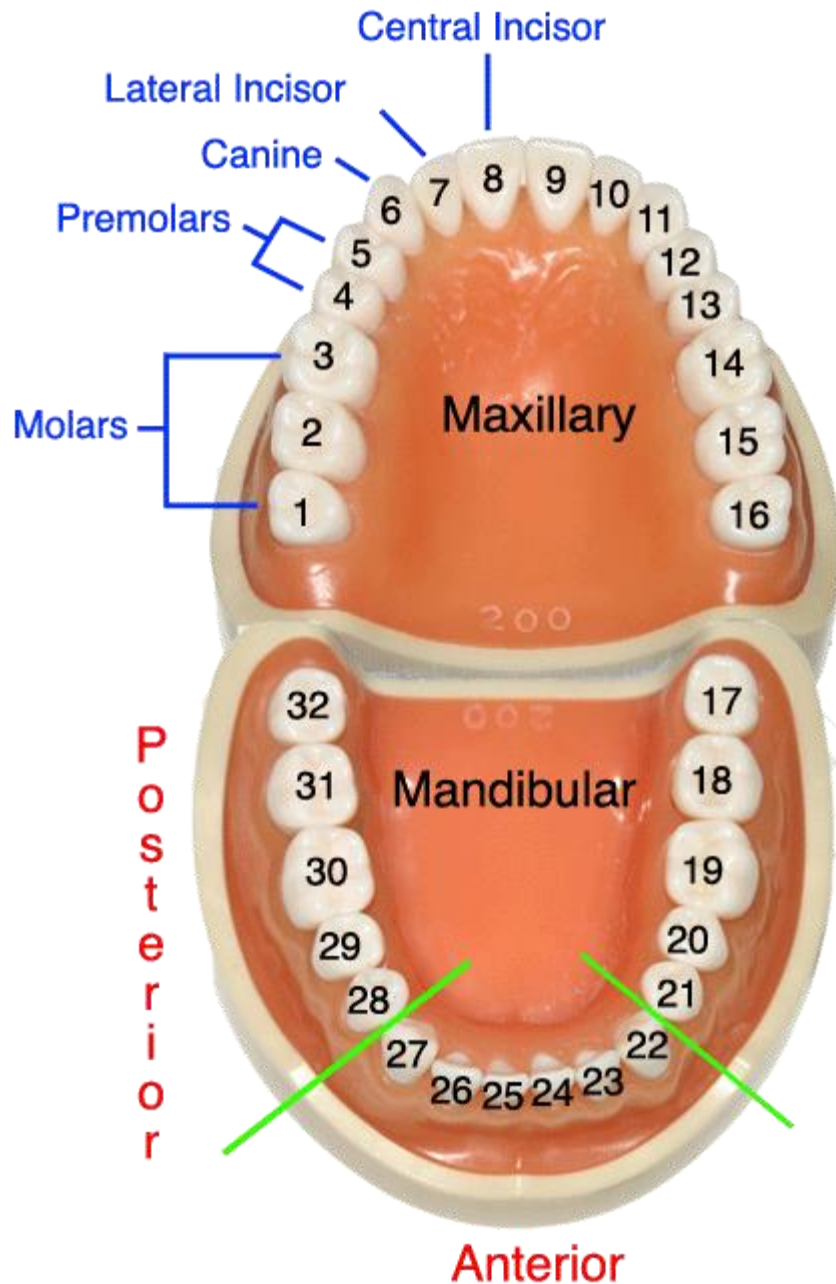
# Tooth Identification Systems

Numbering or Coding Systems

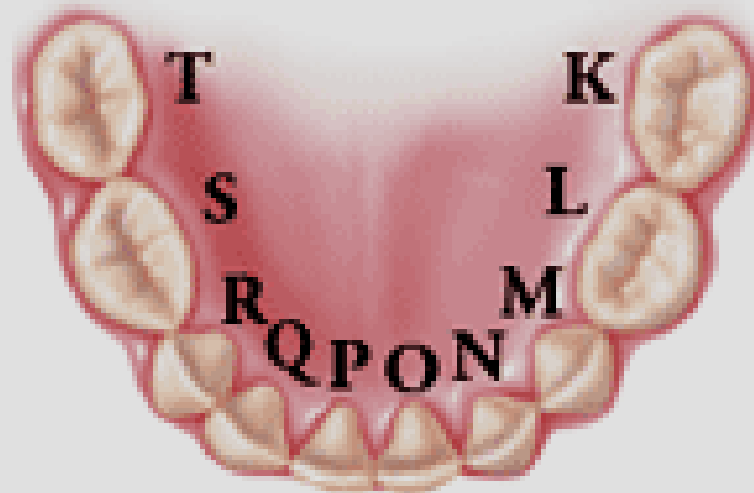
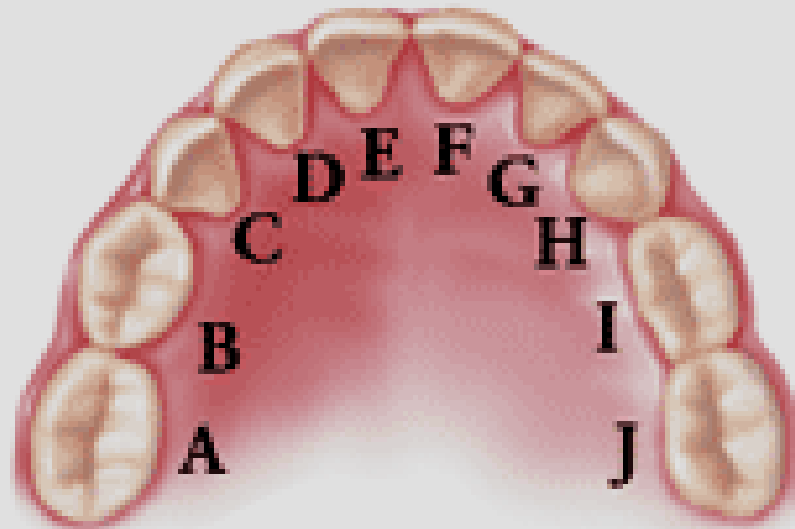
- 1. Universal System
- 2. Palmer Notation System
- 3. International FDI System (two digit system)



# 1- Universal system for Permanent Teeth

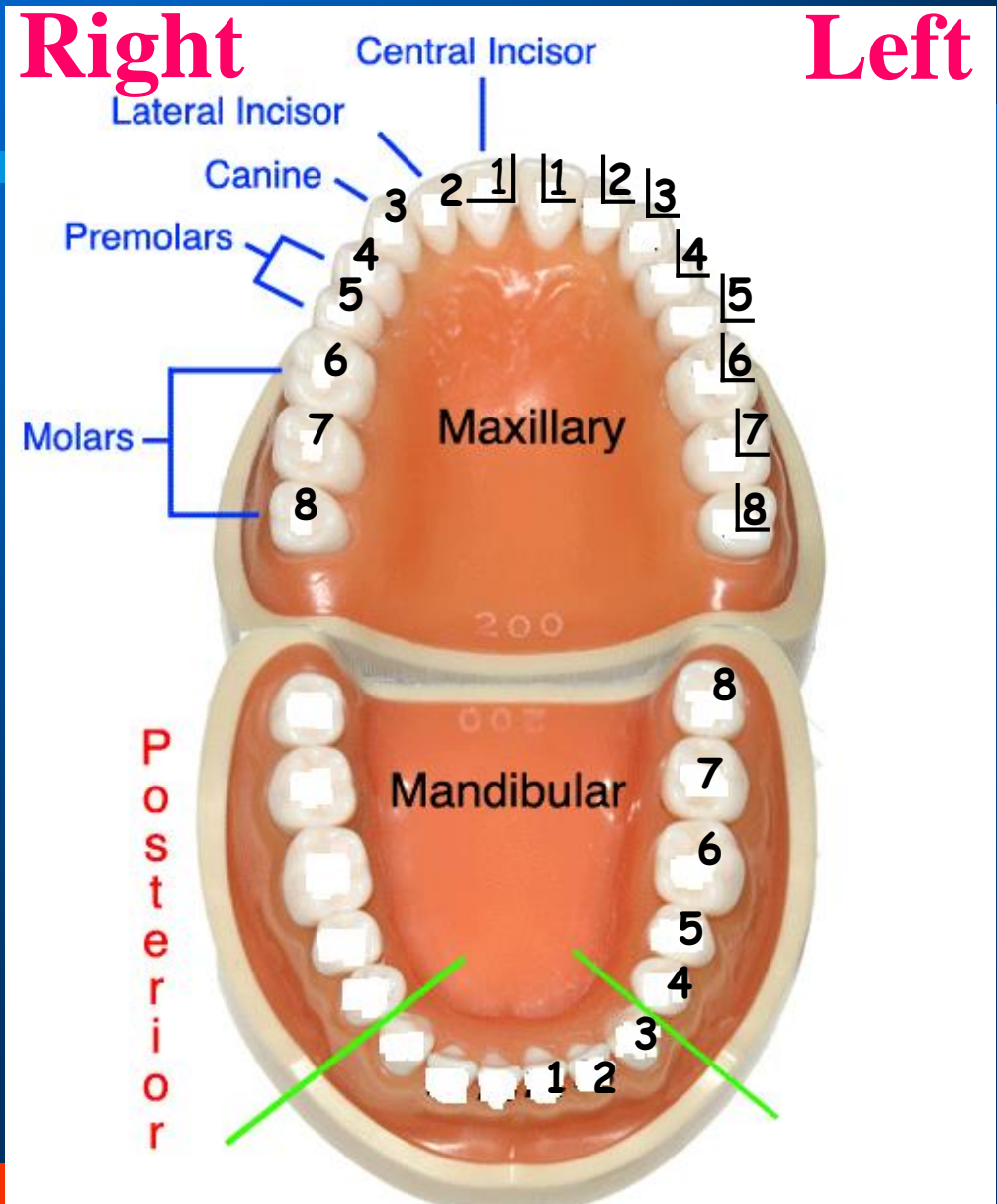


# Universal System for Primary Teeth





# 2-Palmer Notation System for Permanent Teeth



8 - 1

1 - 8

8 - 1

1 - 8

It represents the four quadrants of the dentition

as if you are facing the patient.

In upper right



In upper left



In lower right



In lower left



**Horizontal and vertical lines = symbol for the quadrant**

**The *permanent teeth* are numbered from 1-8 on each side from the midline.**

Upper right

8 7 6 5 4 3 2 1

Upper left

1 2 3 4 5 6 7 8

8 7 6 5 4 3 2 1

Lower right

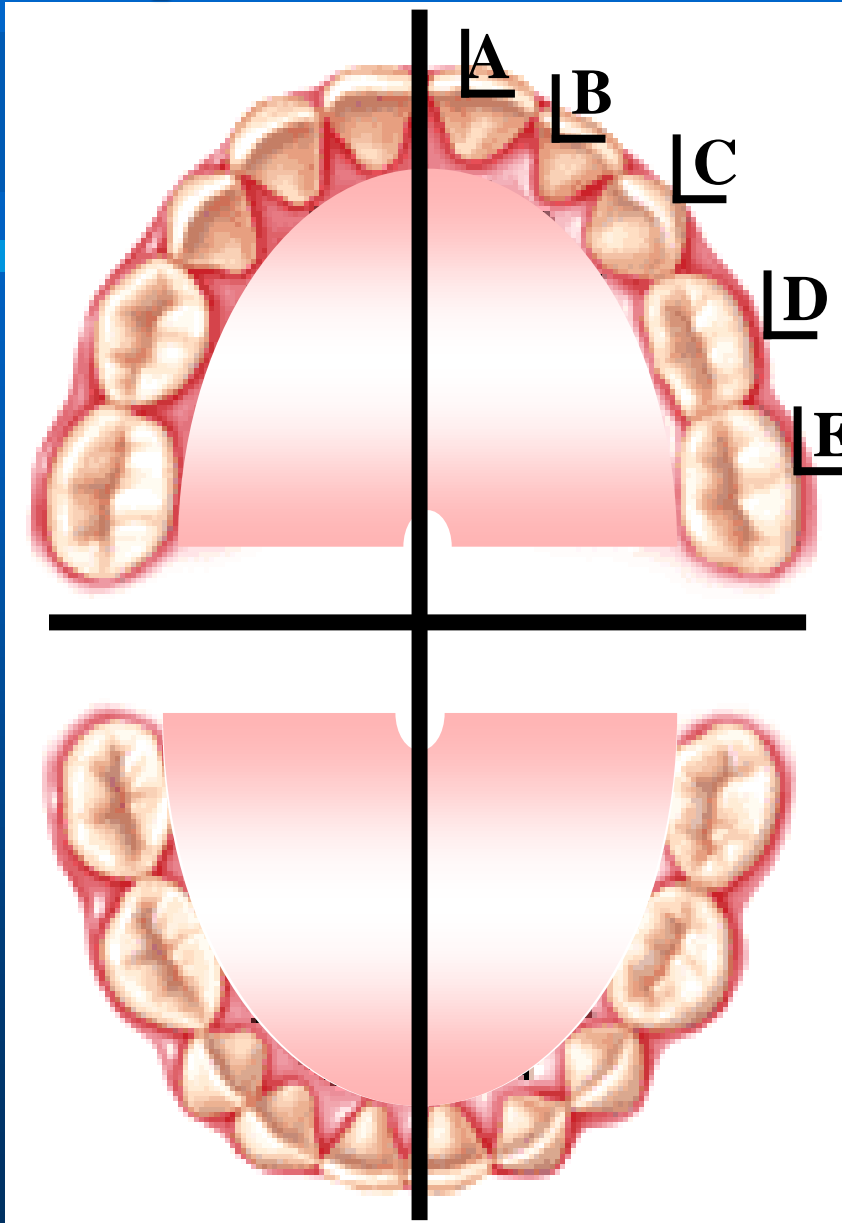
1 2 3 4 5 6 7 8

Lower left

# Palmer Notation System

for Primary Teeth

E-A



A-E

E-A

A-E

**The deciduous teeth are lettered  
from A-E on each side from the midline**

**Upper right**

**E D C B A**

**Upper left**

**A B C D E**

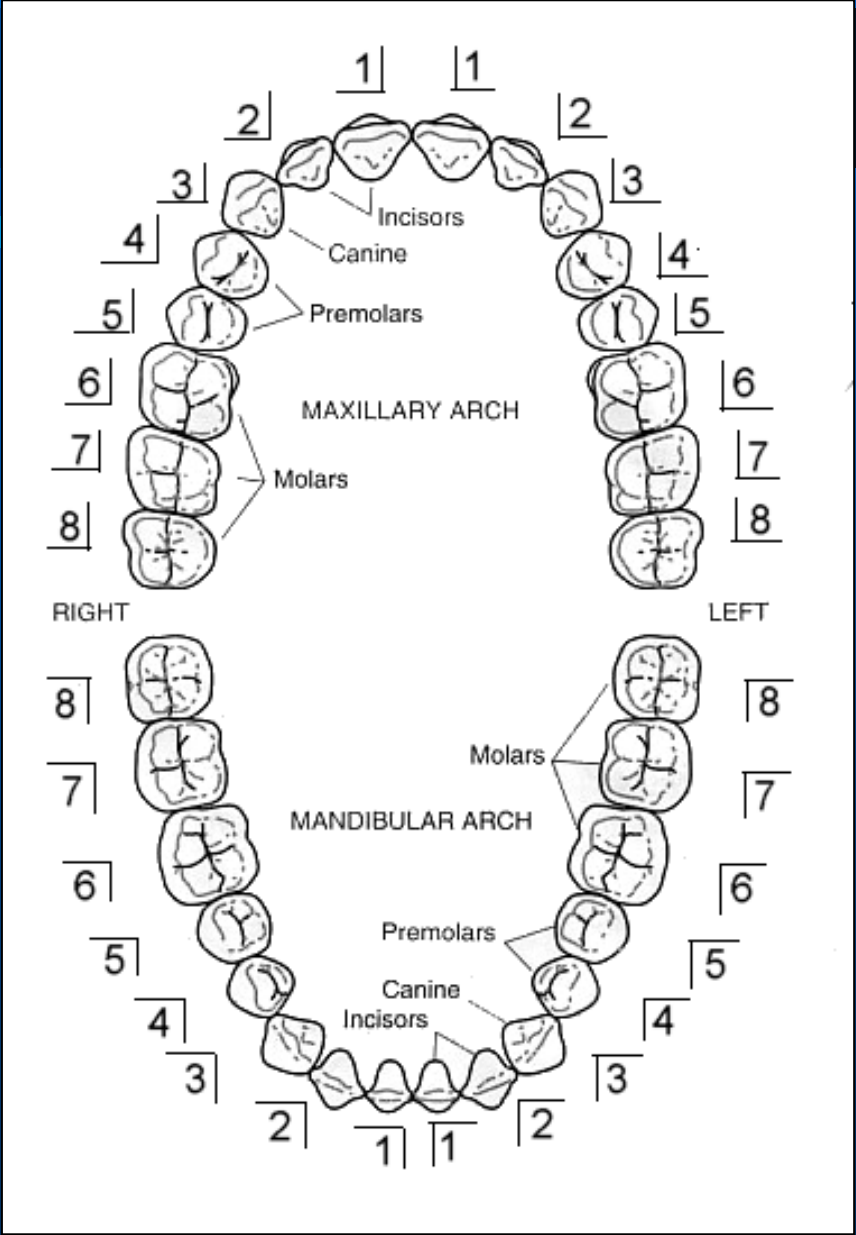
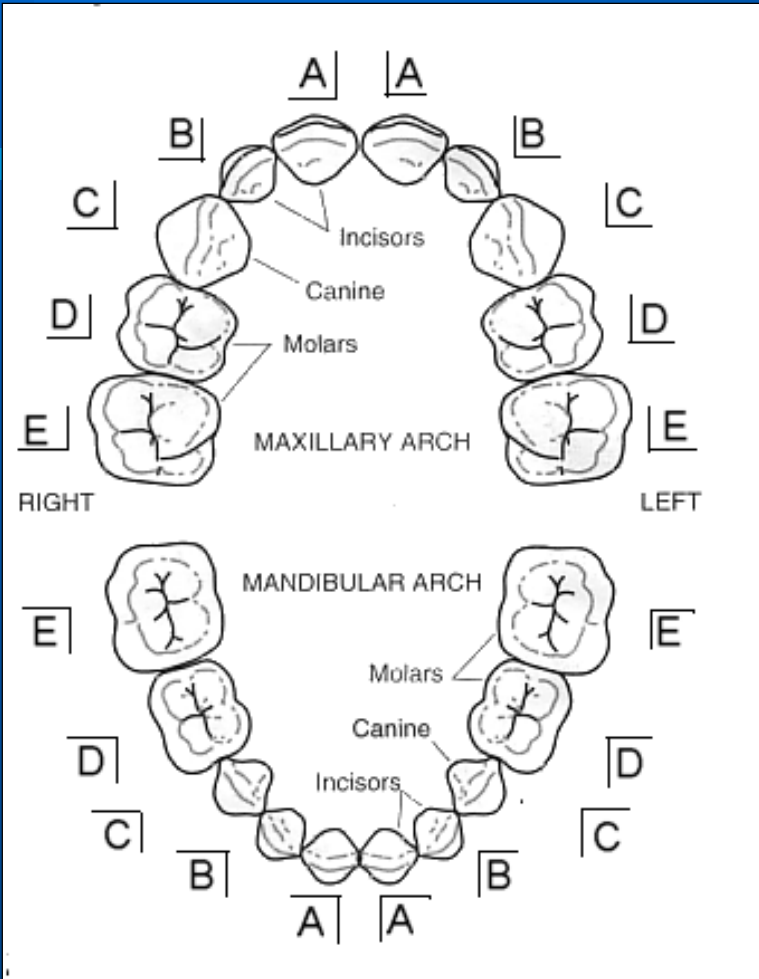
**E D C B A**

**A B C D E**

**Lower right**

**Lower left**

# Palmer Notation System



# 2-The International Numbering System

## “FDI” Federation Dentaire International (the two digit system)

The teeth are designated by using two-digits:

- a. The **first digit** of the code is located at the left side of the number and indicates the **quadrant**:

### In permanent dentition

U.R.	<b>1</b>		<b>2</b>	U.L.
L.R.	<b>4</b>		<b>3</b>	L.L.

### In deciduous dentition

U.R.	<b>5</b>		<b>6</b>	U.L.
L.R.	<b>8</b>		<b>7</b>	L.L.

# 3-International System (Two Digit System)

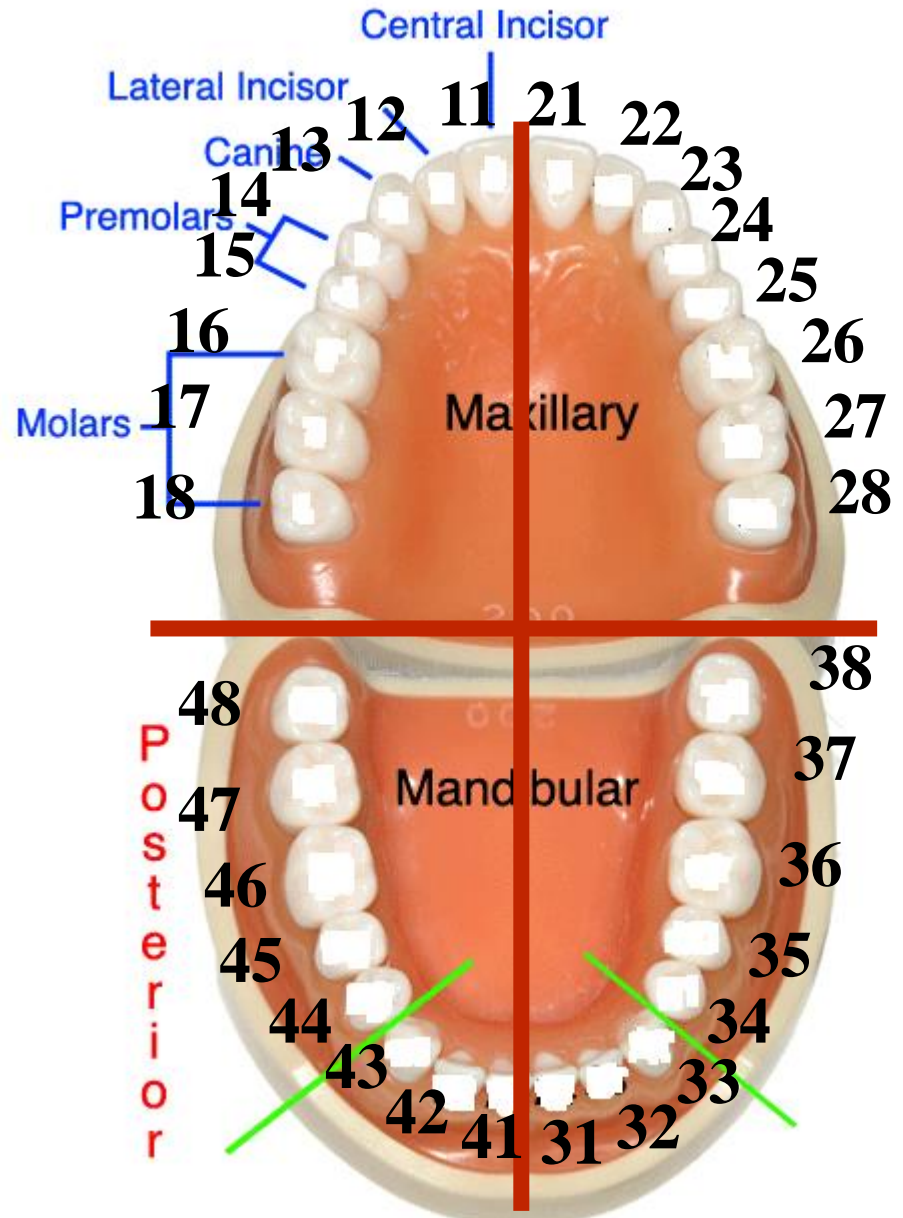
**“FDI”**

**Federation Dentaire  
International**

**First Digit = quadrant**



## For permanent Teeth



# Second Digit = Tooth number in the quadrant

b- The **second digit** is located at the right side of the number and indicates the **number of the tooth** in the quadrant.

☀ The two digits should be pronounced separately.

## Permanent teeth

18 17 16 15 14 13 12 11

21 22 23 24 25 26 27 28

48 47 46 45 44 43 42 41

31 32 33 34 35 36 37 38

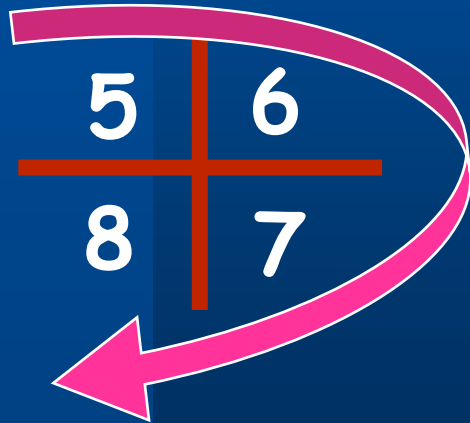


# 2-International System (Two Digit System)

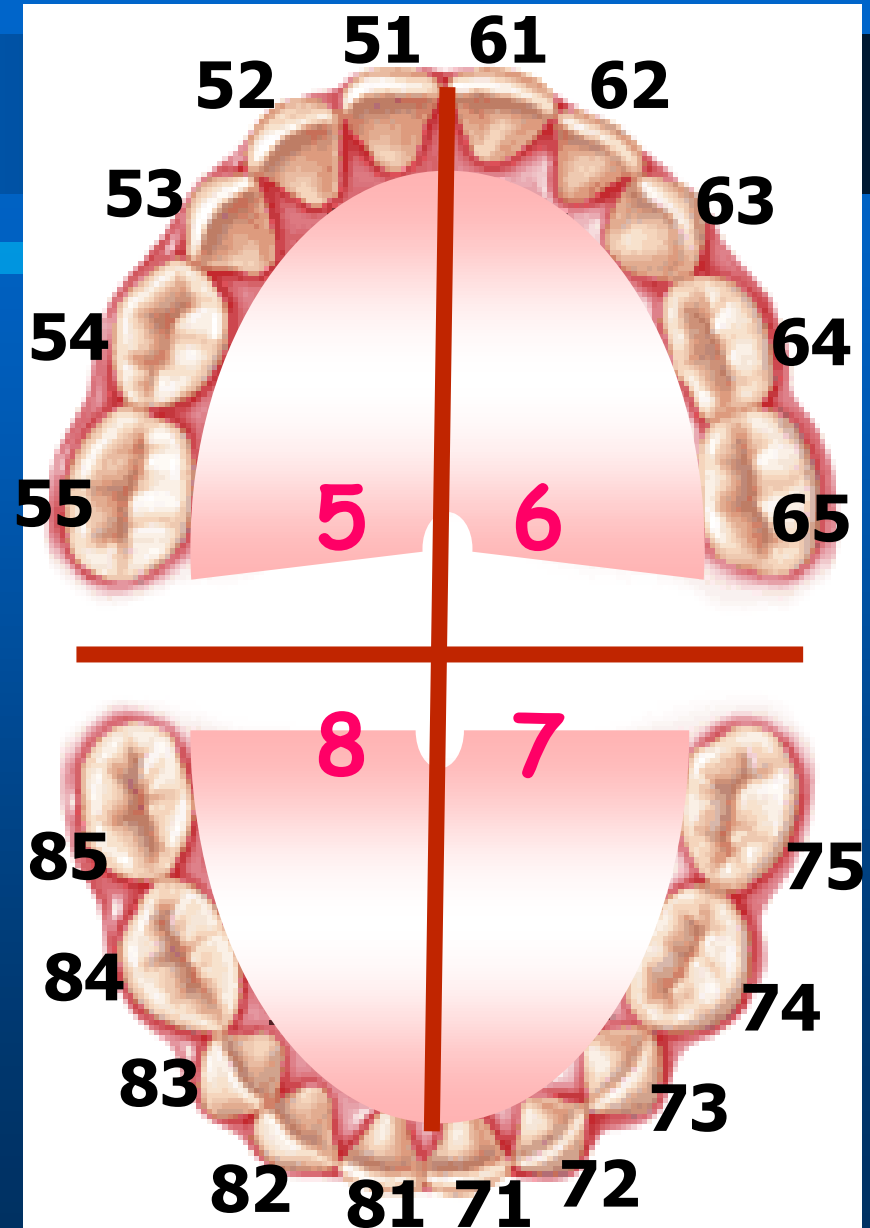
“FDI”

Federation Dentaire  
International

First Digit = quadrant



## For Primary Teeth



For Primary Teeth

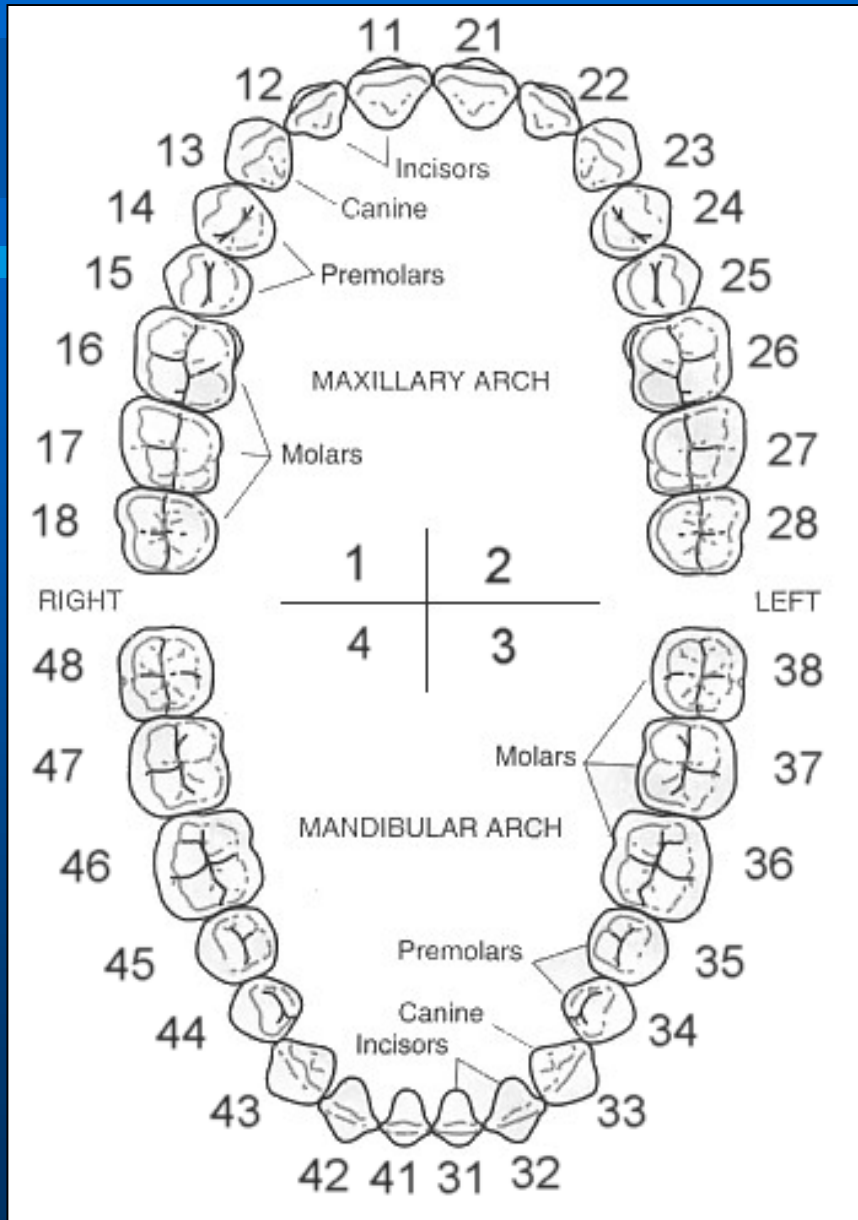
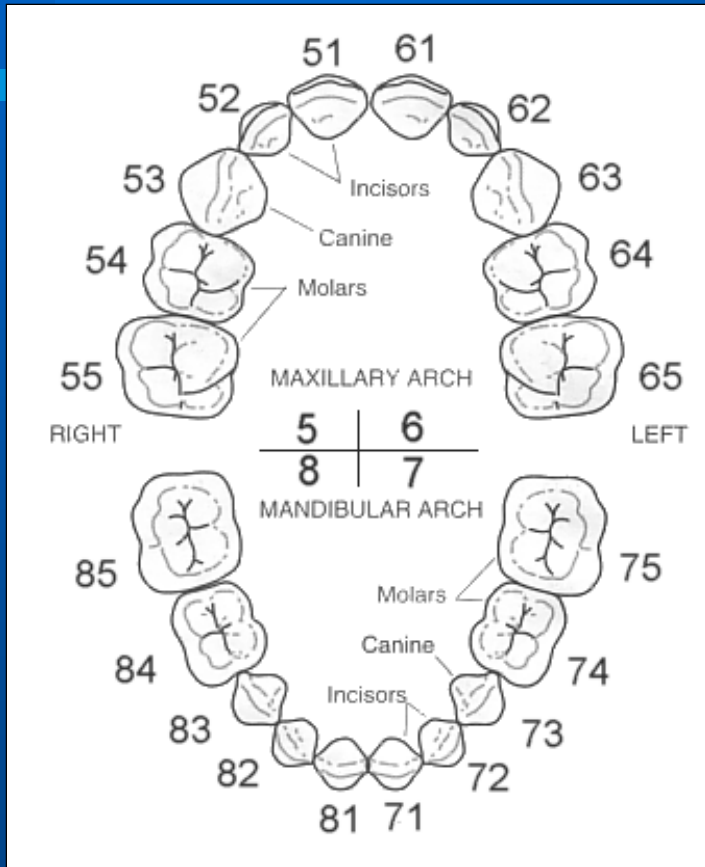
First Digit = quadrant

5	6
8	7

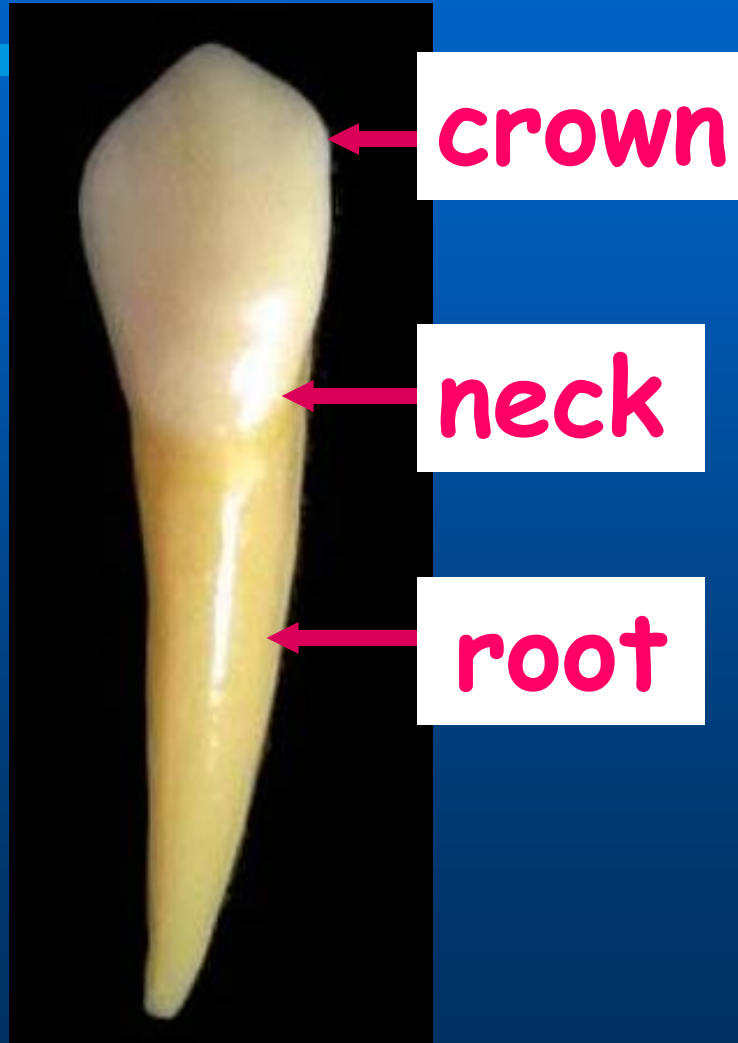
Second Digit = Tooth number in the quadrant

## Primary Teeth

55	54	53	52	51	61	62	63	64	65
85	84	83	82	81	71	72	73	74	75



# Macro anatomy of Teeth



# Single-rooted

# Multi-rooted



THANK YOU

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