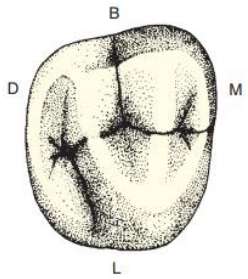
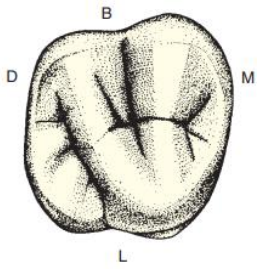
Maxillary second molars

The maxillary second molar is a smaller replica of the first molar with similar root and canal morphology. It is the seventh tooth from the midline of the maxillary arch and supplements the maxillary first molar in function. It is also known as "teenager tooth" because of its age of eruption. No fifth cusp is evident.



Maxillary right second molar

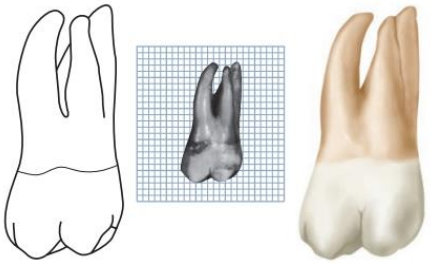


Maxillary right first molar

Principal identifying features:

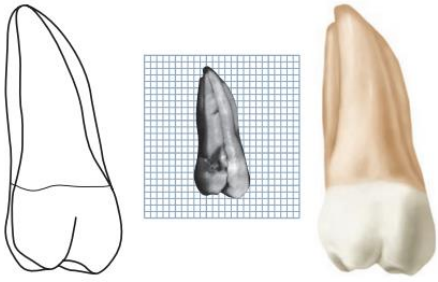
1. No fifth cusp is evident.
2. Roots are less divergent and may coalescent.
3. Disto-buccal and Disto-lingual cusps are less developed.
4. The crown is smaller in all dimensions than maxillary first molar.

Buccal aspect:



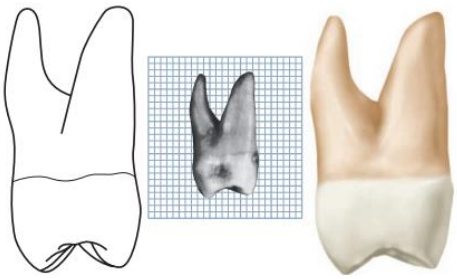
1. The crown is smaller in all dimensions than maxillary first molar.
2. The disto-buccal cusp is smaller and allows part of distal marginal ridge and part of disto-lingual cusp to be seen.
3. The buccal roots are about the same length. They are nearly parallel and more inclined distally more than that of maxillary first molar.
4. The palatal root is the longest root (about 1 mm longer than buccal roots).

Lingual aspect:



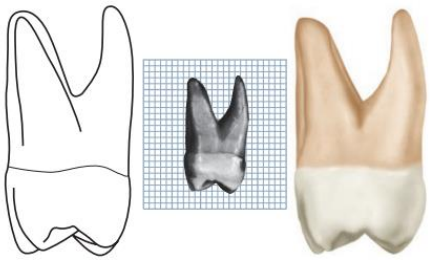
1. The disto-lingual cusp is smaller than that of maxillary first molar.
2. No fifth cusp.
3. The apex of palatal root is in a line with disto-lingual cusp tip.
4. Disto-buccal cusp may be seen mesial to the disto-lingual cusp.

Mesial aspect:



1. Bucco-lingual dimension is the same as that of maxillary first molar but the crown length is smaller.
2. The roots are less divergent bucco-lingually.

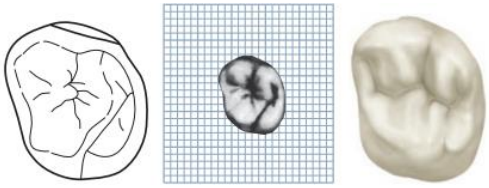
Distal aspect:



The disto-buccal cusp is smaller than mesio-buccal cusp, therefore; meso-buccal cusp can be seen from this aspect.

Occlusal aspect:

1. The crown has rhomboidal shape, with the acute angles are less and the obtuse angles are more than that of maxillary first molar.
2. The bucco-lingual diameter is the same but the mesio-distal diameter is smaller by about 1 mm than that of maxillary first molar.
3. Disto-buccal and mesio-buccal cusps are less developed than that of maxillary first molar.

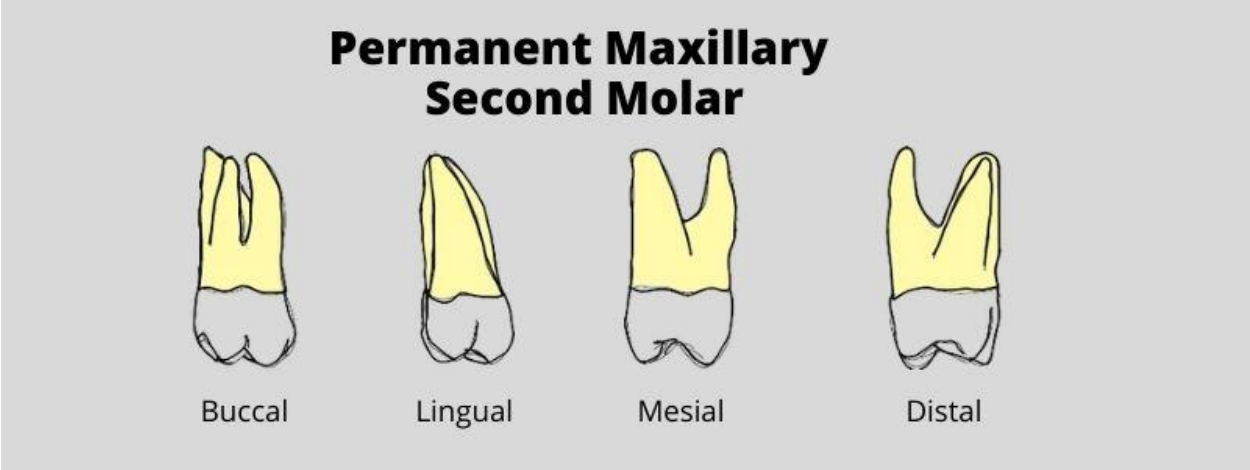


4. No fifth cusp (cusp of carabelli).
5. Supplemental grooves and pits are common to be found on the occlusal surface more than that on the maxillary first molar.

Measurement Table

	Cervico-occlusal Length of Crown	Length of Root	Mesiodistal Diameter of Crown	Mesiodistal Diameter of Crown at Cervix	Labio- or Buccolingual Diameter of Crown	Labio- or Buccolingual Diameter of Crown at Cervix	Curvature of Cervical Line—Mesial	Curvature of Cervical Line—Distal
Dimensions* suggested for carving technique	7.0	Buccal = 11 Lingual = 12	9.0	7.0	11.0	10.0	1.0	0.0

*In millimeters.



The maxillary third molar

It is often appears as a developmental anomaly. It can vary considerably in size, contour, and relative position to the other teeth. It has smaller crown and shorter roots compared to that in maxillary seconded molar. It supplements the maxillary second molar in function.

Principal identifying features:

1. It is the smallest of maxillary molars.

2. Has triangular occlusal outline, with the disto-lingual cusp is very small and poorly developed and may be absent.

3. The roots are shorter, convergent, often fused and usually three in number.

4. The mesio-lingual cusp is the largest.

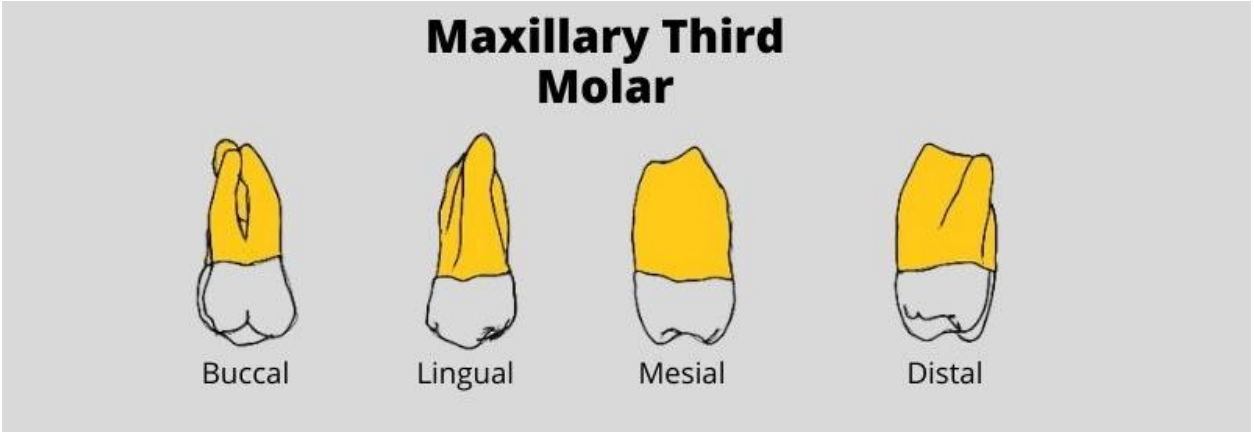
5. It may have many variations:

   a. Heart shape with three cusps (most common type).

   b. Rhomboidal shape with four cusps.

   c. One cusp type occlusally (peg shape).

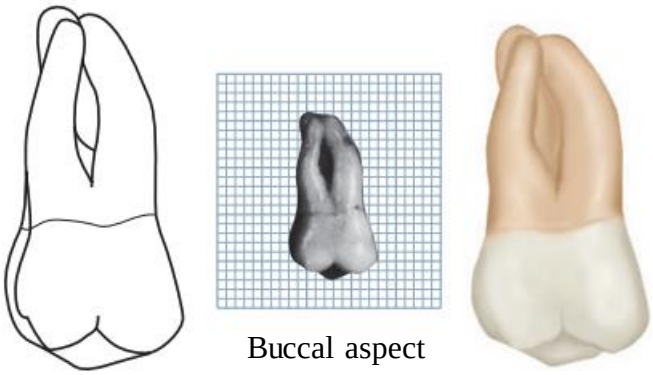
   d. Congenitally missing.



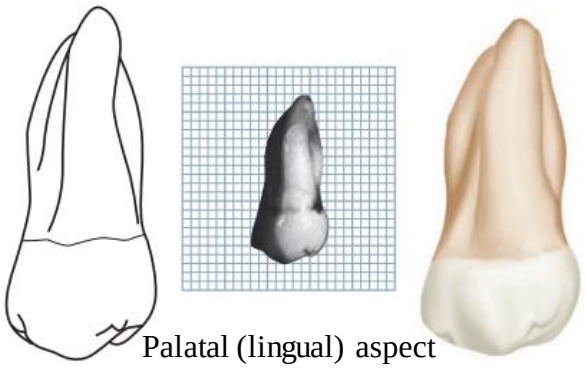
Measurement Table

	Cervico-occlusal Length of Crown	Length of Root	Mesiodistal Diameter of Crown	Mesiodistal Diameter of Crown at Cervix	Labio- or Buccolingual Diameter of Crown	Labio- or Buccolingual Diameter of Crown at Cervix	Curvature of Cervical Line—Mesial	Curvature of Cervical Line—Distal
Dimensions* suggested for carving technique	6.5	11.0	8.5	6.5	10.0	9.5	1.0	0.0

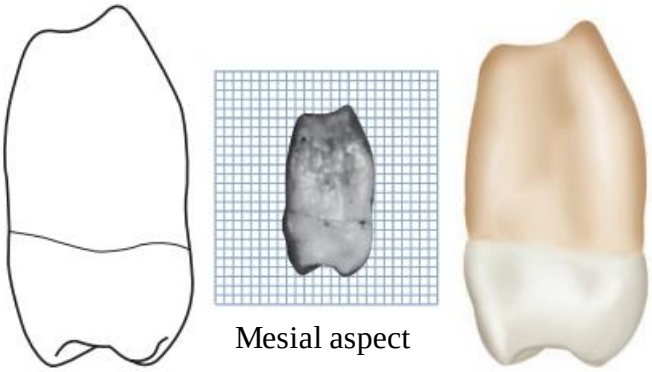
*In millimeters.



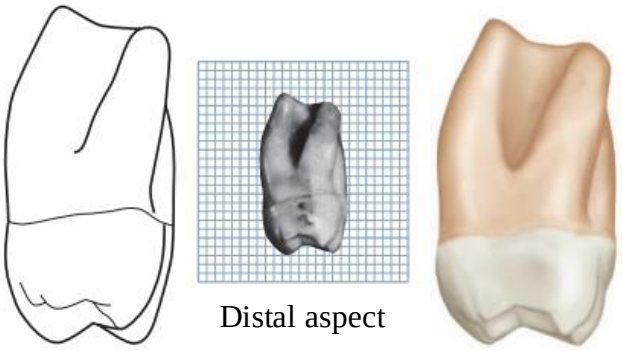
Buccal aspect



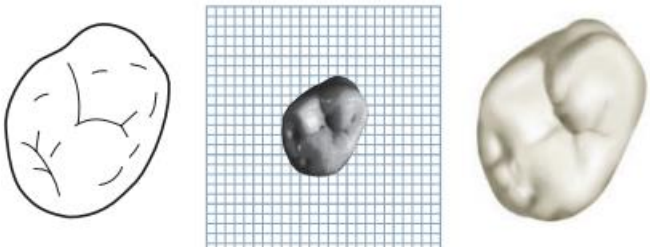
Palatal (lingual) aspect



Mesial aspect



Distal aspect



Occlusal aspect