

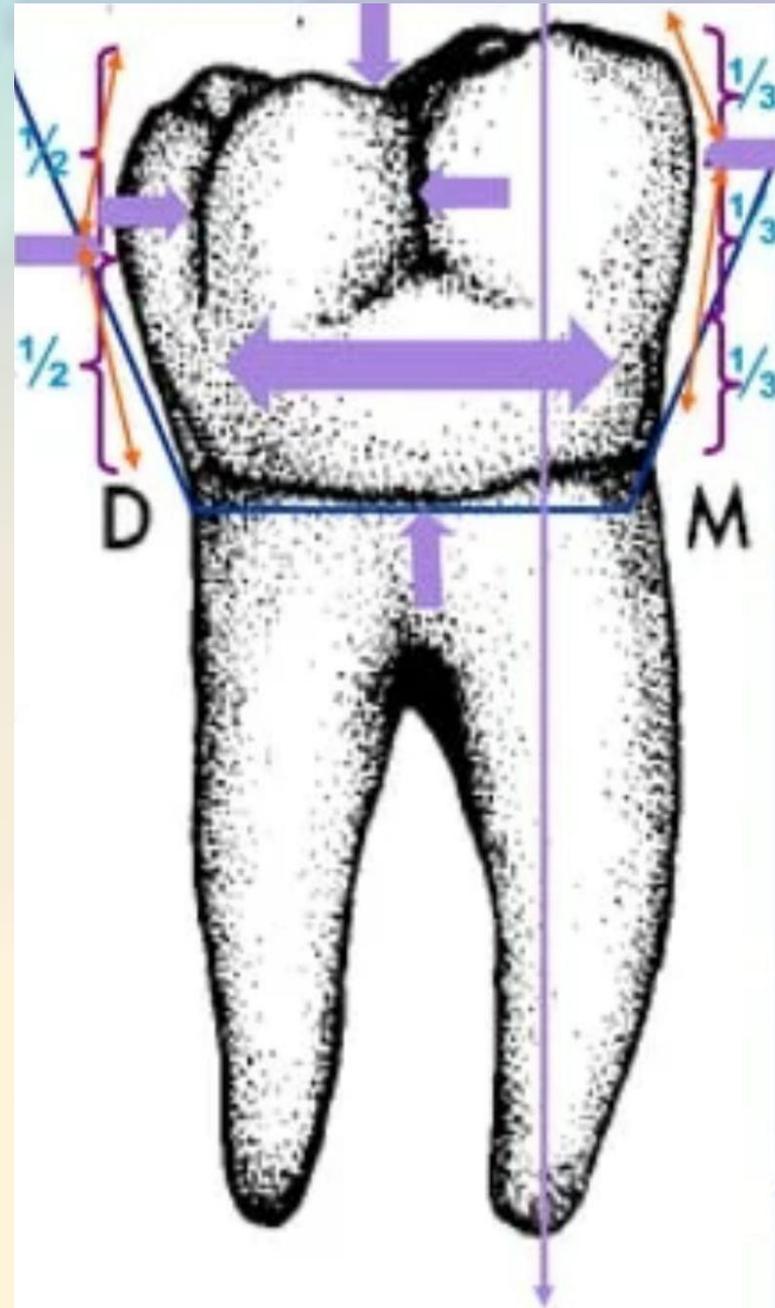
Mandibular first molar

Principal Identifying Features

1. It is the largest mandibular teeth .
2. Wide occlusal surface rectangular in shape and most of food mastication takes place in this region .
3. It erupts at the age of (6-7) years .
4. Five cusps (two buccal , two lingual & one distal cusp).
5. Two roots , one mesial and one distal which are widely separated at the apex

Buccal aspect for 1st lower molar

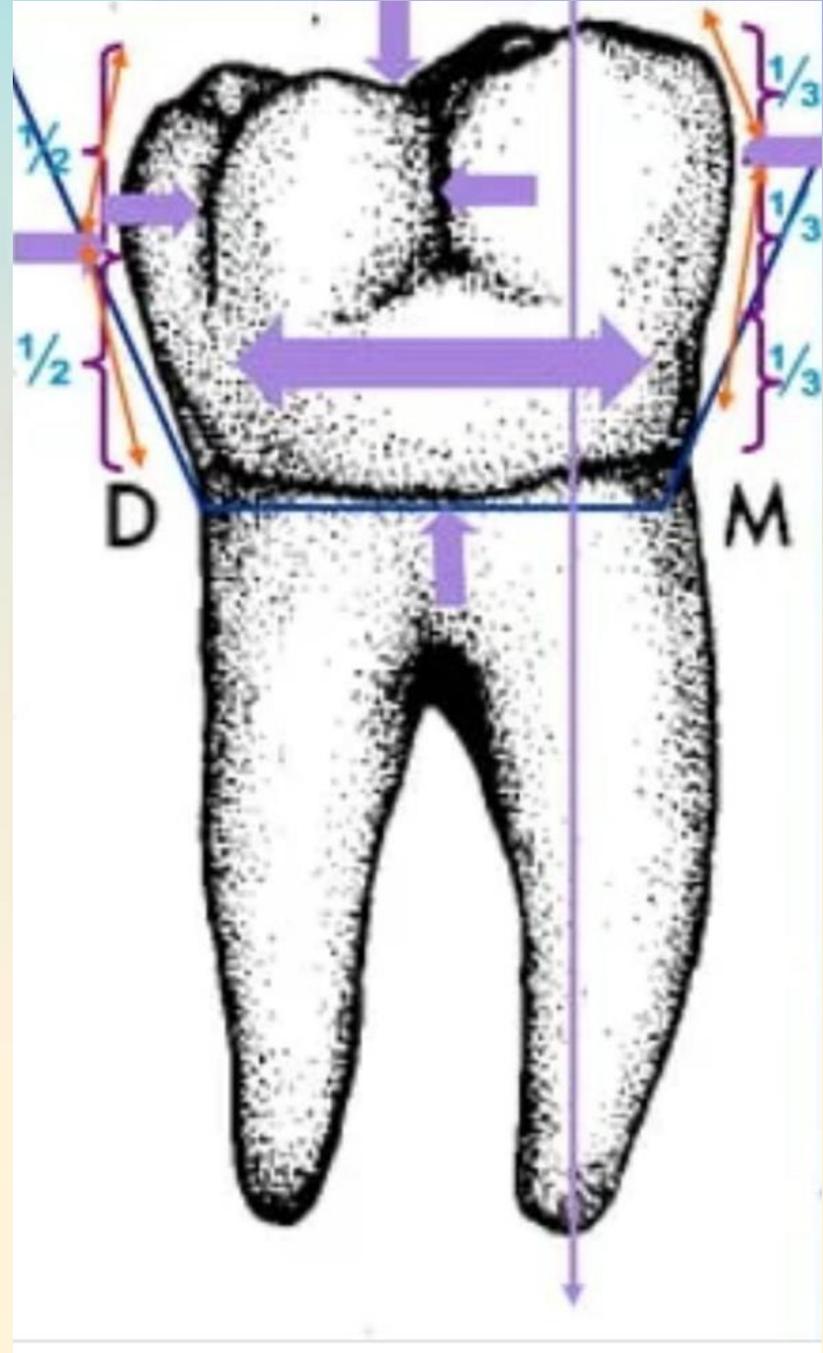
1. Roundly trapezoidal in shape with the cervical and occlusal outlines representing the uneven sides of the trapezoid.
 2. We can see all five cusps from this aspect: two buccal and one distal, two lingual, the two lingual higher than the others.
 3. There are two buccal developmental grooves acting as lines of division between the cusps:
 - (a) The Mesio-buccal developmental groove: separating between the mesialbuccal cusp and distobuccal cusp.
 - (b) Disto buccal developmental groove: separating between the distobuccal cusp and distal cusp.
- The mesiobuccal developmental groove is shorter than the distobuccal one



7. The mesio-buccal cusp is slightly wider than the disto-buccal cusp, and they make together 80% of the mesiodistal width of the crown, while the distal cusp makes the rest 20% .

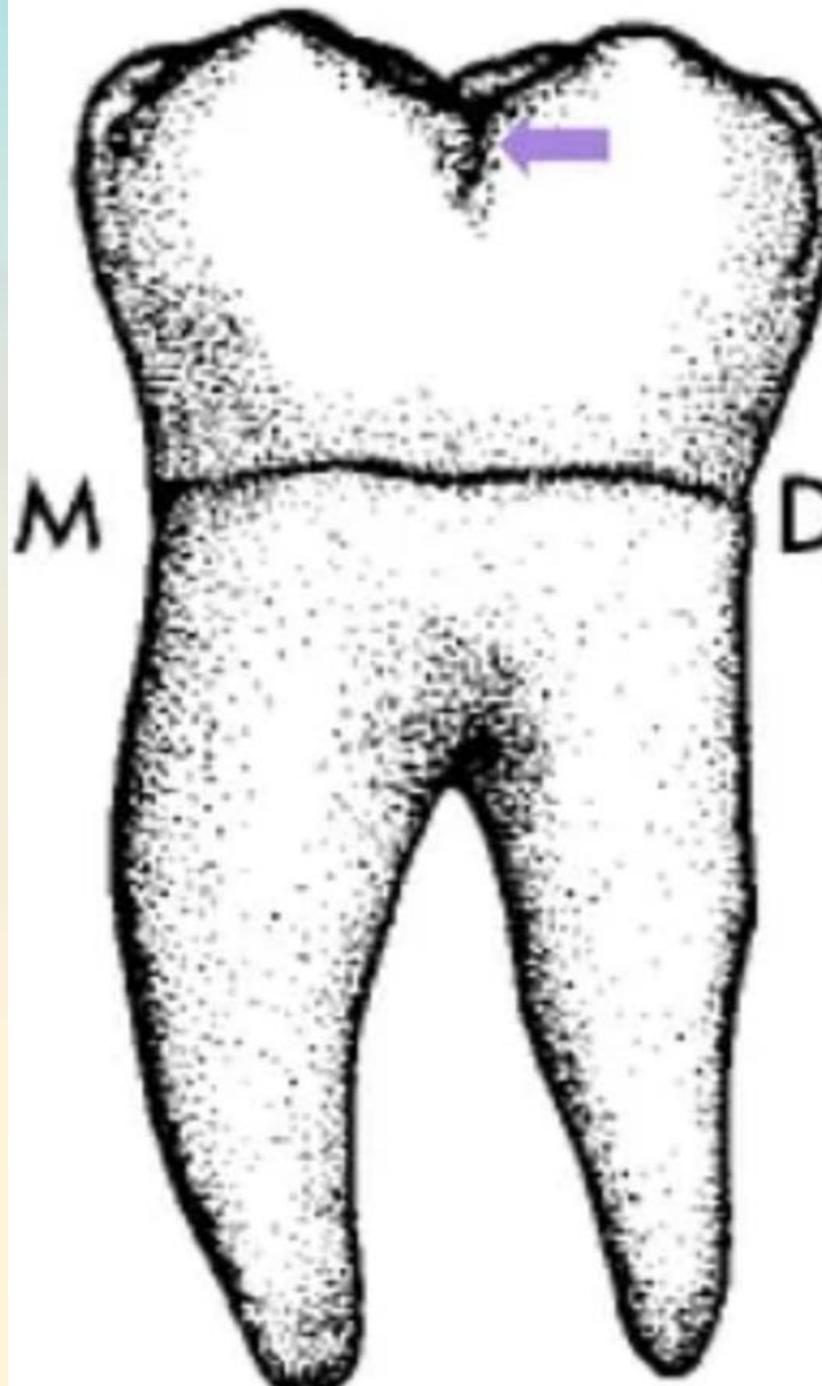
8. The bifurcation area is about three 3mm. below the cervical line.

9. There is deep developmental depression on root trunk from this aspect .



2. Lingual aspect

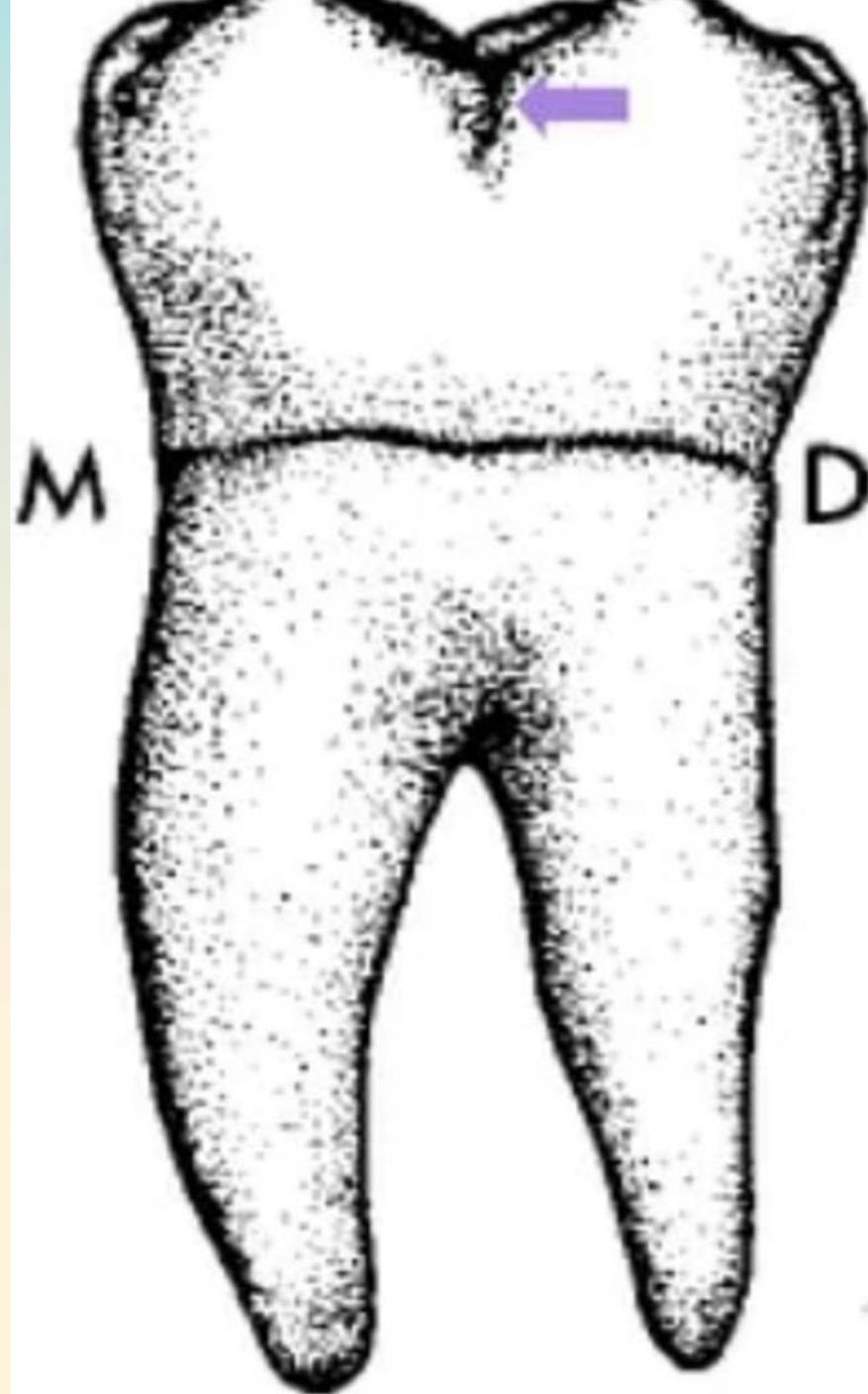
1. Three cusps can be seen from this aspect: Two lingual cusps (mesio-lingual) &(Disto-lingual) cusp can be seen and part of the distal cusp.
2. The cusp ridge of the mesio-lingual and disto-lingual cusp are pointed and higher showing .
3. lingual developmental groove which separates between the two cusps pass for a short distance lingually.



4. The mesio-lingual cusp tip is higher and larger than disto-lingual cusp tip.

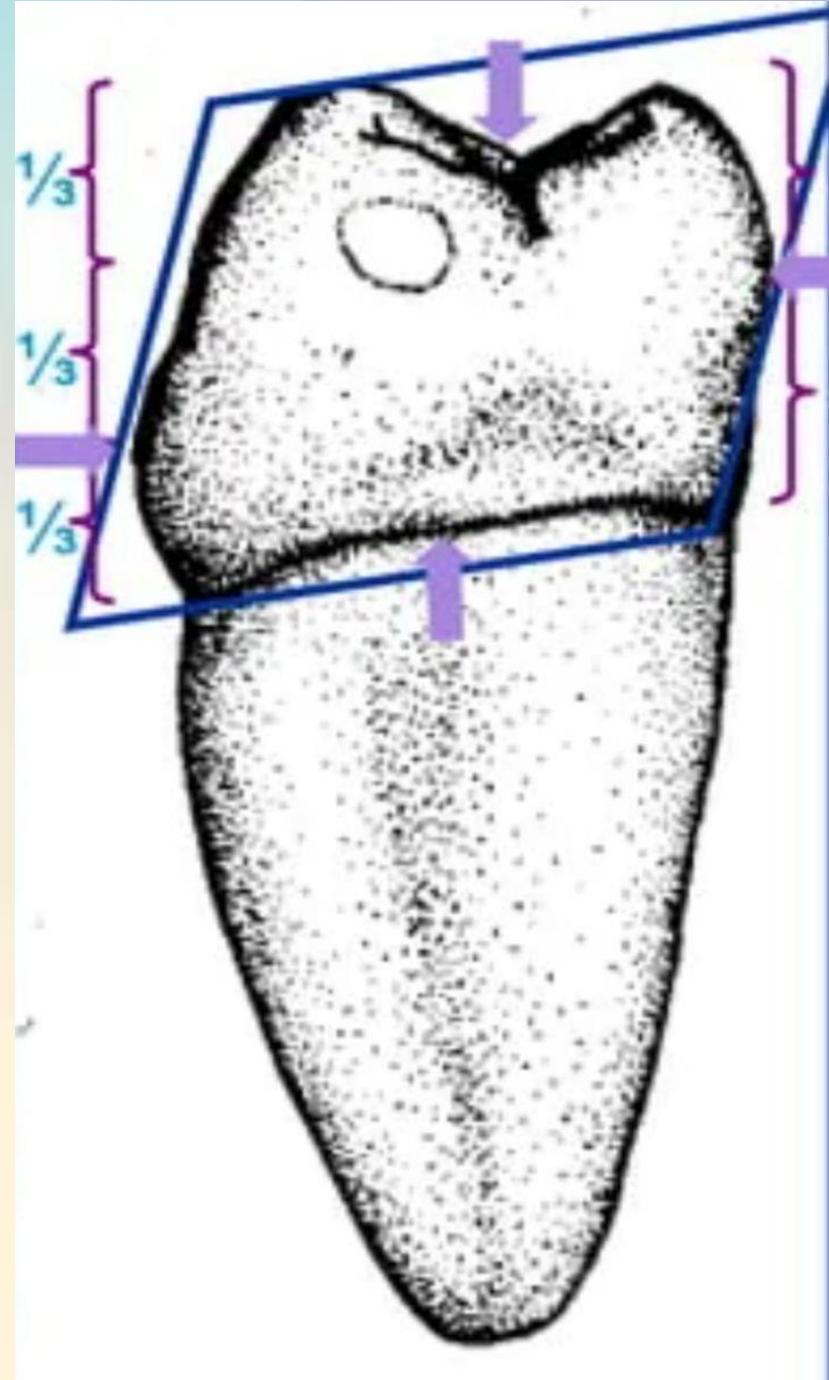
5. Mesial outline of crown is convex from the cervical line to marginal ridge, crest of contour which represent contact area is higher than crest of contour of distal outline of crown.

6. The angle formed between the mesio-lingual and disto-lingual cusp is more obtuse



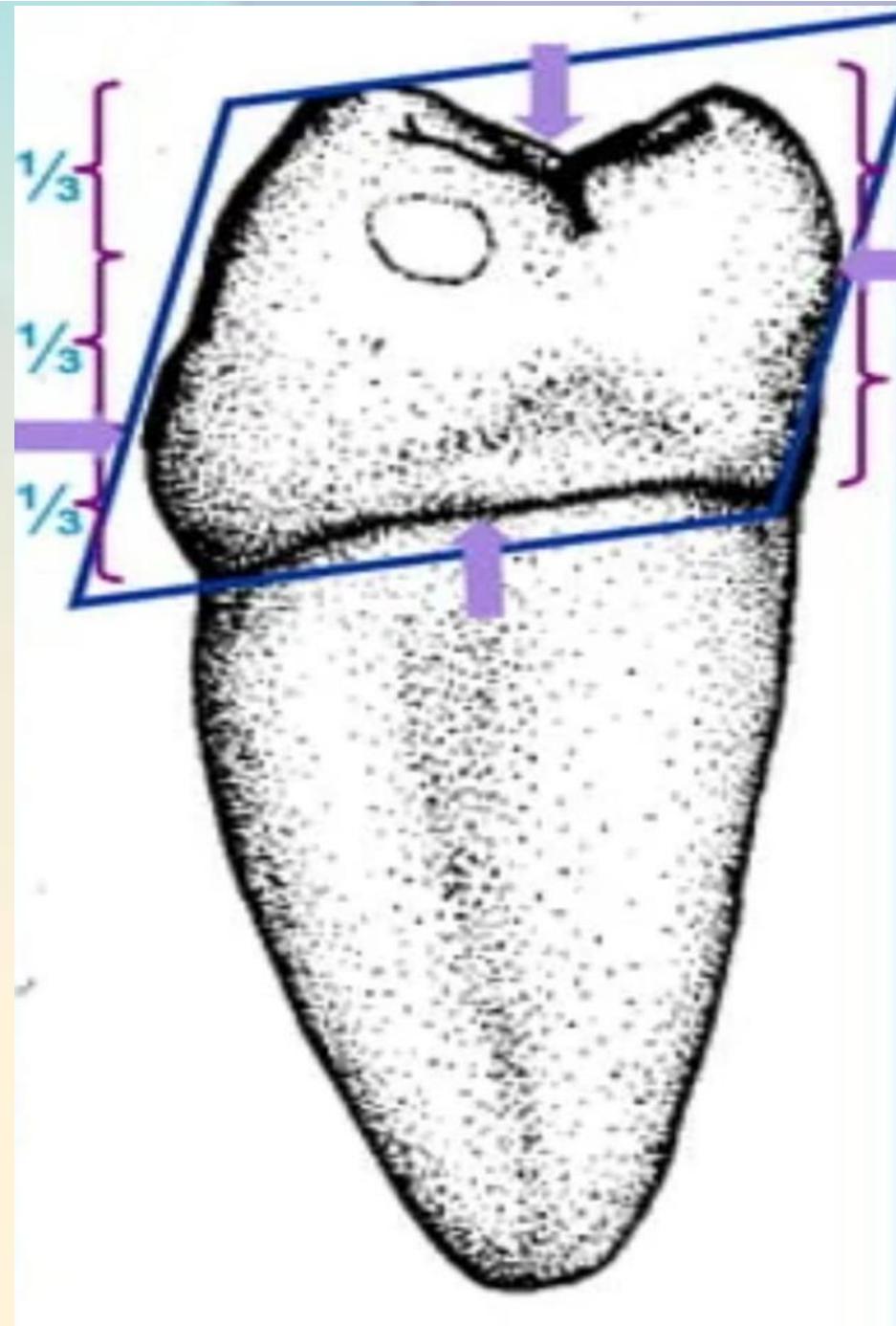
Mesial aspect

1. Mesio –buccal , mesio-lingual cusp and mesial root can be seen here .
2. Bucco-lingual dimension at the crown and root are more than on the distal side .
3. Crown is Rhomboidal , with a lingual tilt in relation to root long axis .
4. The cervical line is irregular tends to be curved occlusally .
5. Mesial marginal ridge is 1 mm below the level of cusp tip.



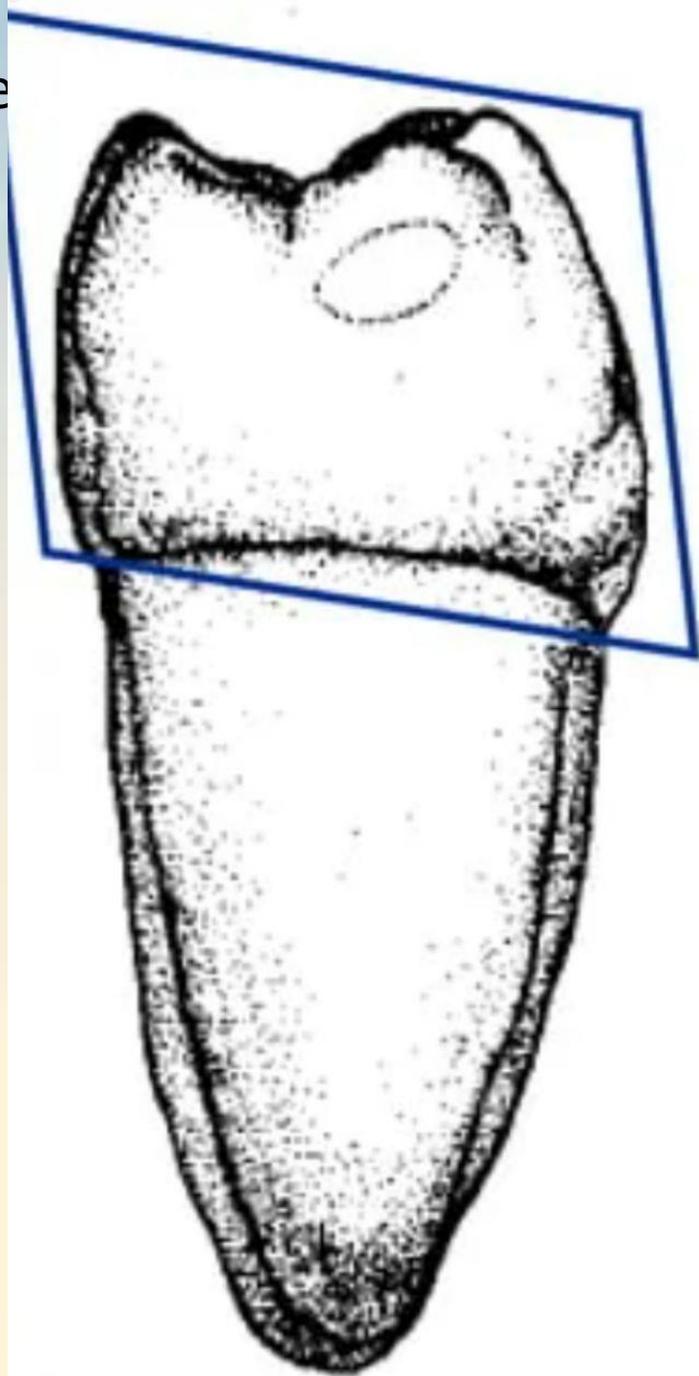
Mesial aspect

Buccal out line of the crown is convex from the cervical line up to the junction between the cervical and middle thirds forming the "buccal cervical ridge", then the buccal outline straightens up to the buccal cusp tip.



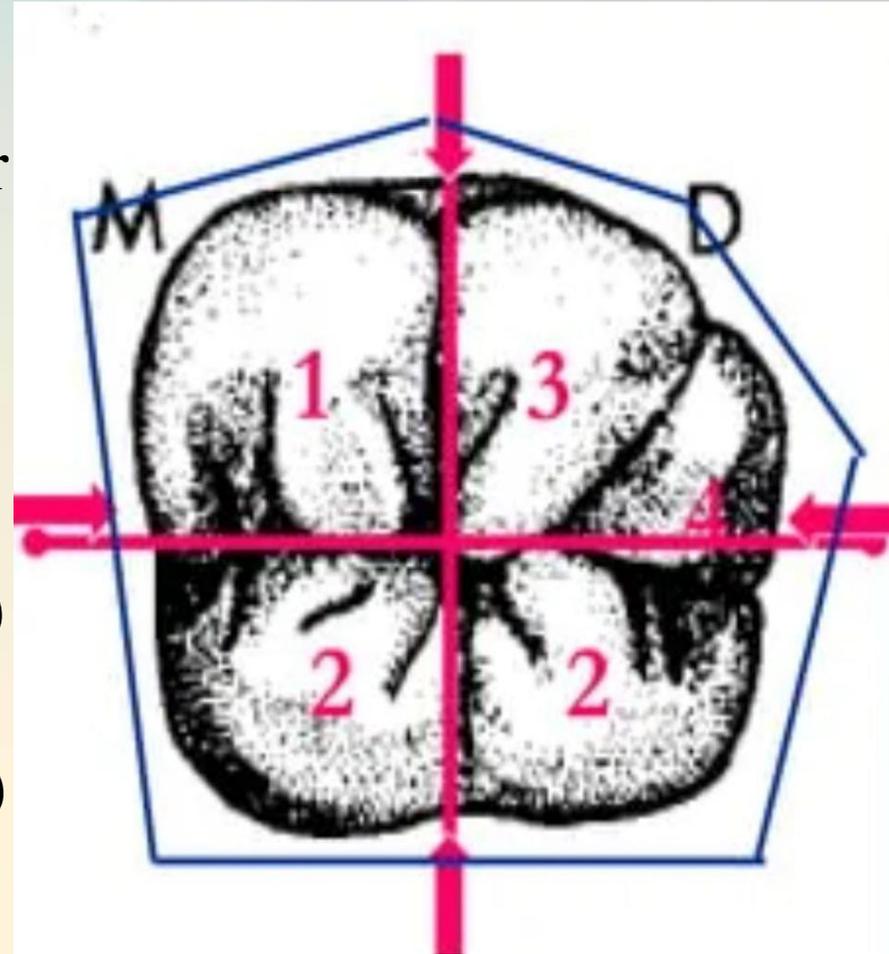
Distal aspect :

1. More of the tooth can be seen because the crown is shorter distally than mesially , so most of the occlusal surface can be seen from the distal aspect .
2. The distal cusp located buccal to the center of the bucco-lingual distance .
3. Distal marginal ridge is short and curves cervically to form an obtuse angle and developmental groove is found crossing marginal ridge .
4. Distal contact area located below the distal cusp ridge of distal cusp.
5. Cervical line almost straight some time it is irregular



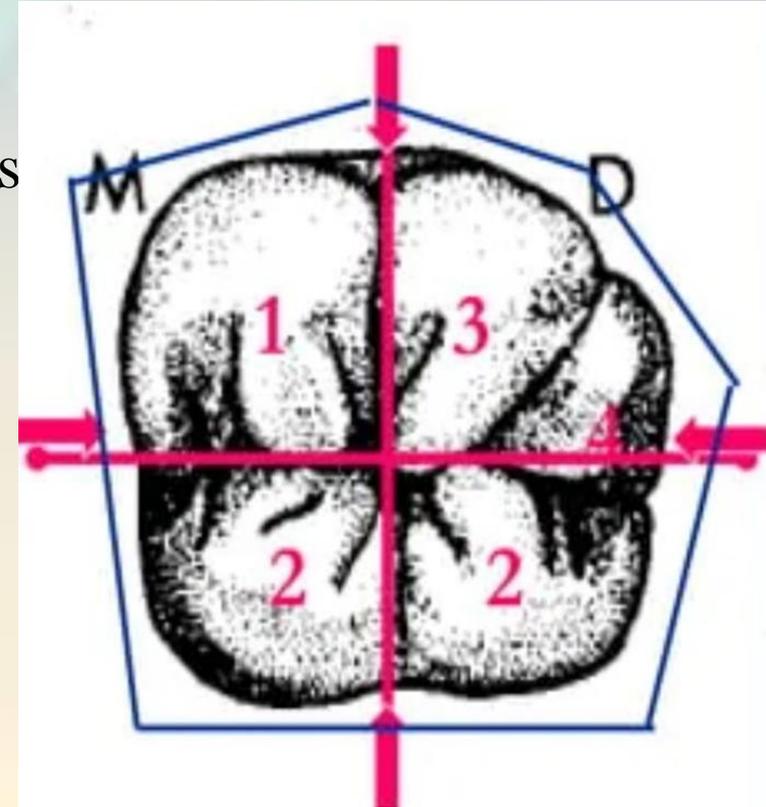
Occlusal aspect of lower first molar :

1. The occlusal outline is rectangular in shape.
2. Mesio-distal dimension greater 1mm than bucco-lingual dimension by 1 mm.
3. There are Five cusps : The mesio-buccal cusp (Largest cusp) followed by the two equal cusps (mesio-lingual and disto-lingual) then distal cusp (Smallest cusp).



Developmental grooves are following

- a. Central developmental groove :passes from the central pit to the mesial and distal triangular fossae.
- b. Mesio-buccal developmental groove: pass from the central pit to the mesial and distal triangular fossae.
- c. Disto-buccal developmental groove :passes from its junction with the central groove in a distobuccal direction separating the disto-buccal and distal cusps.
- d. Lingual developmental groove : is an irregular groove passes lingually in between the cusps ridge of the mesio-lingual and distolingual cusps.



There are three fossae :

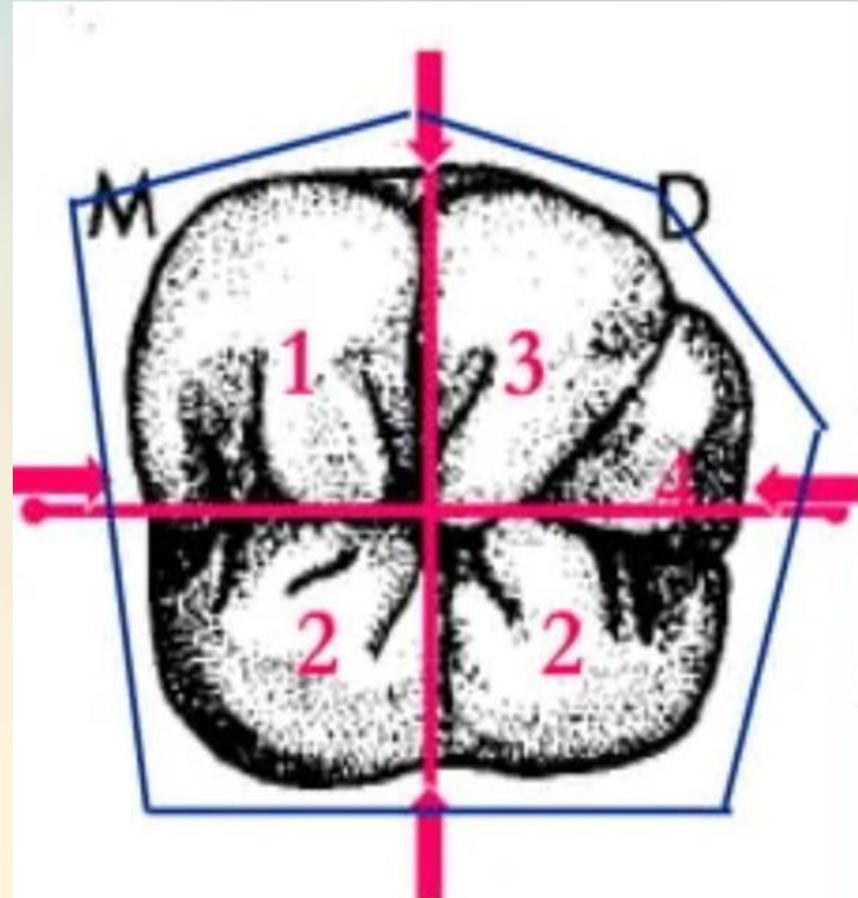
(A) The major fossa :

1. Central fossa (CF) : Which a major fossa is circular in shape , centrally placed on the occlusal surface .

(B) Minor fossa :

1. Mesial triangular fossa (MTF) : located distal to the mesial marginal ridge.

2. Distal triangular fossa (DTF) : located mesial to the distal marginal ridge



**Thank
you**

