



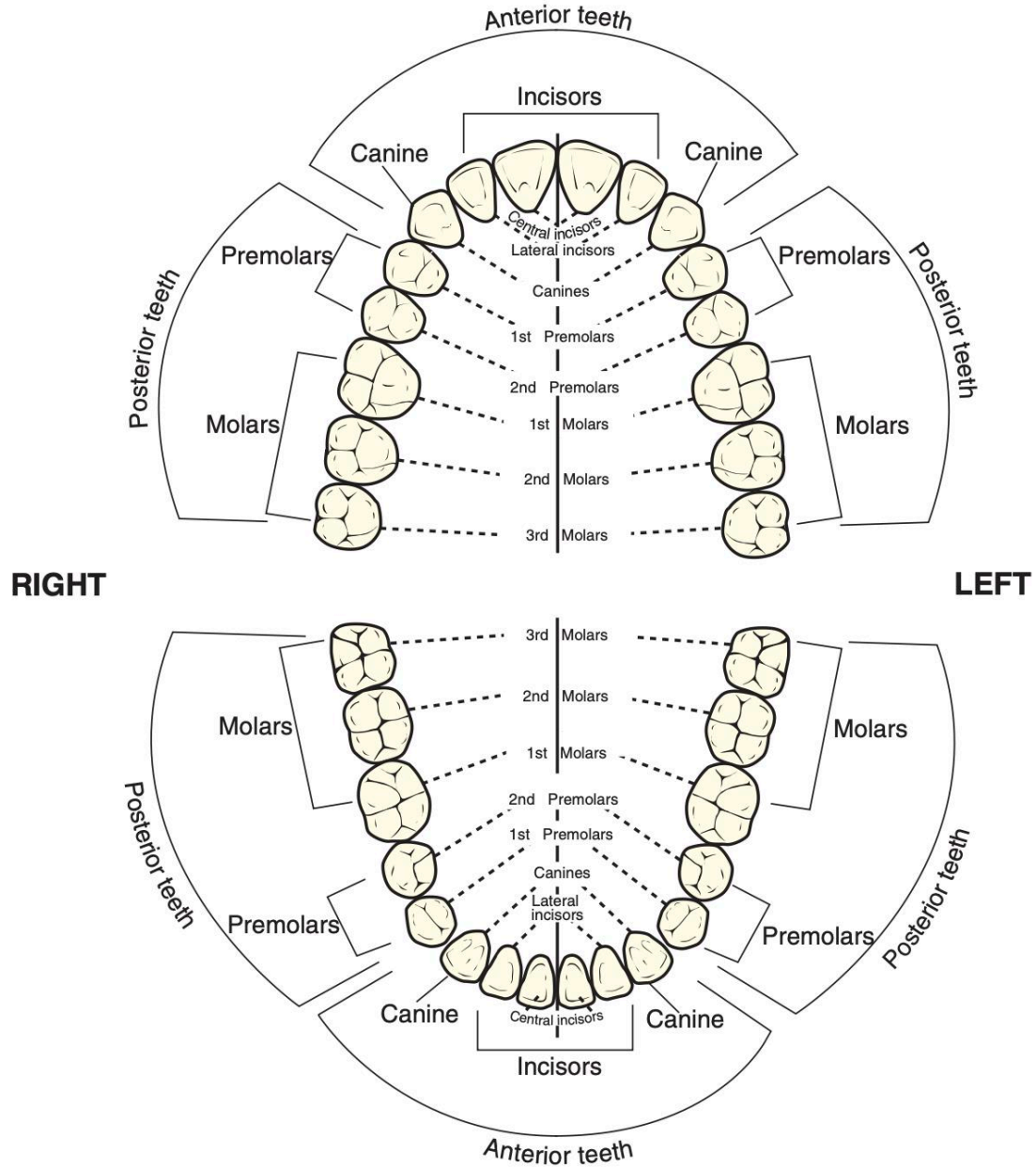


Mandibular Premolars

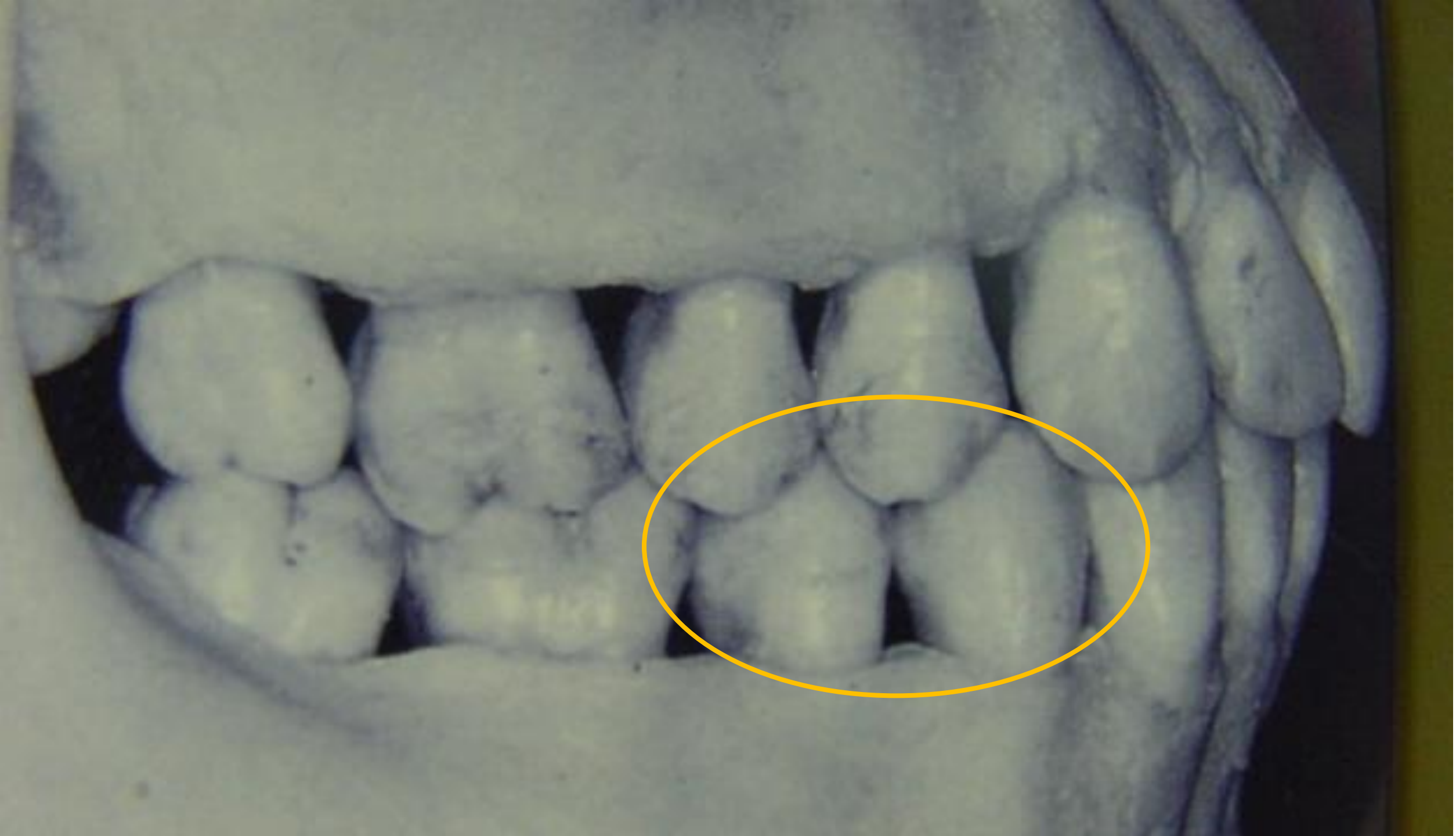
Thiprawee chattrattrai

PERMANENT TEETH

MAXILLARY



MANDIBULAR



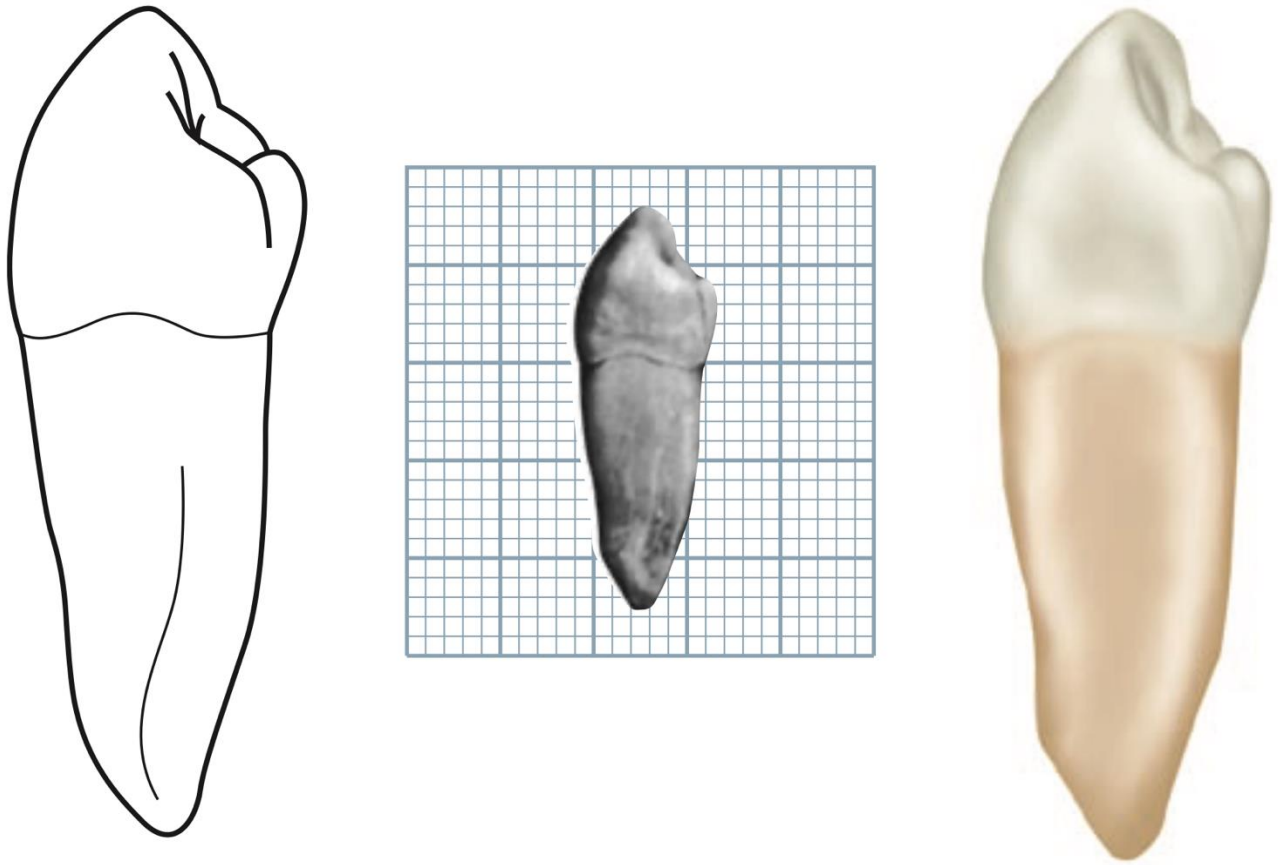
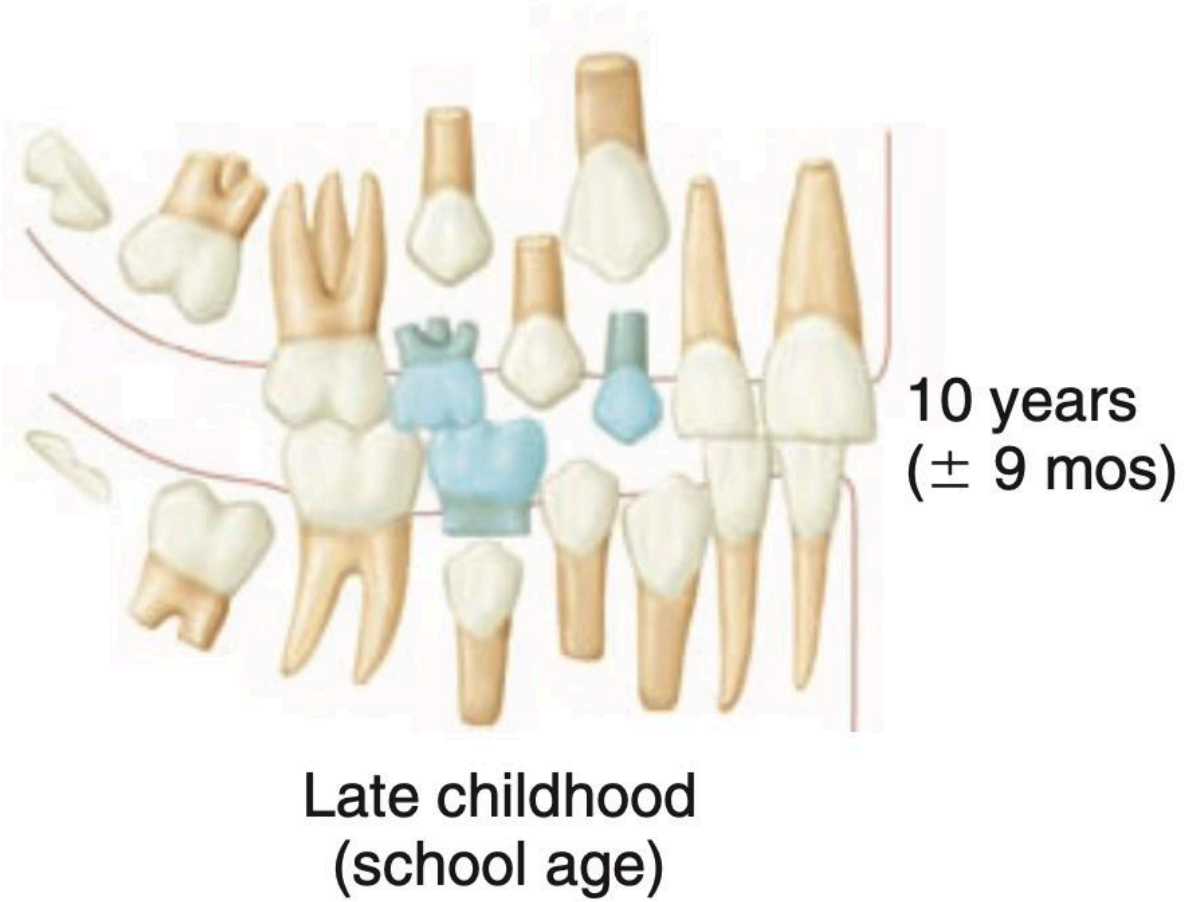


FIGURE 10-4 Mandibular right first premolar, mesial aspect. (Grid = 1 sq mm.)

Mandibular first Premolar

- The smallest premolar
- Large B cusp with small Li cusp



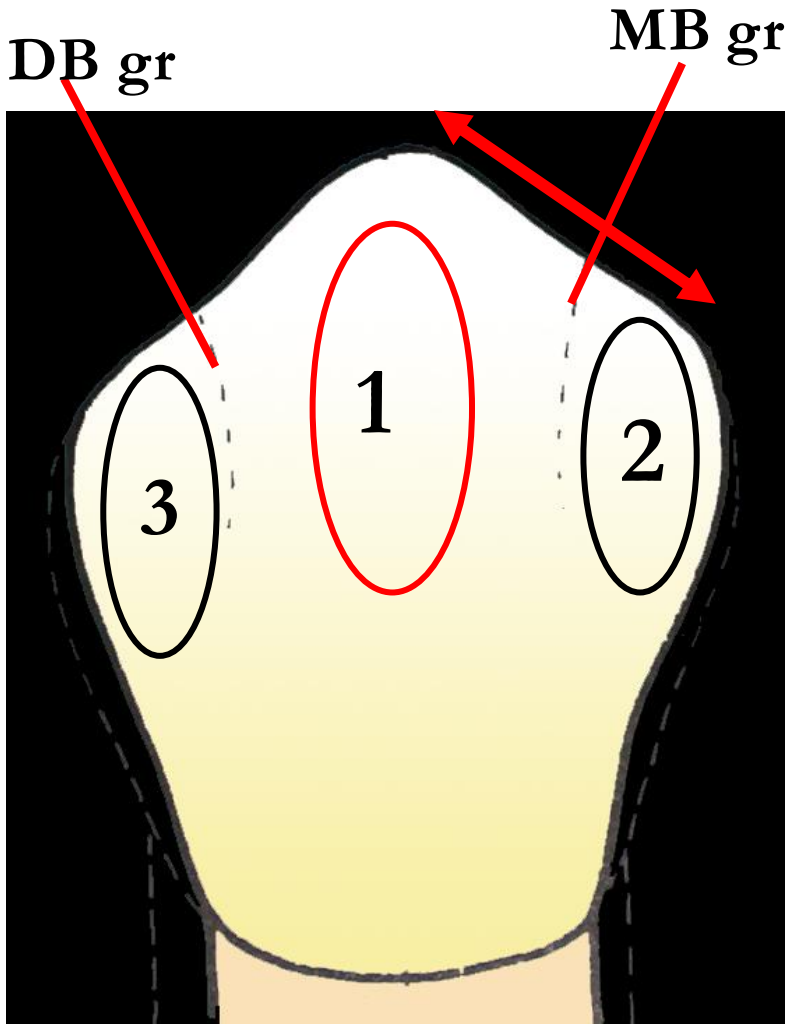
Mandibular First Premolar

- Eruption age : 10-12 years



Buccal aspect

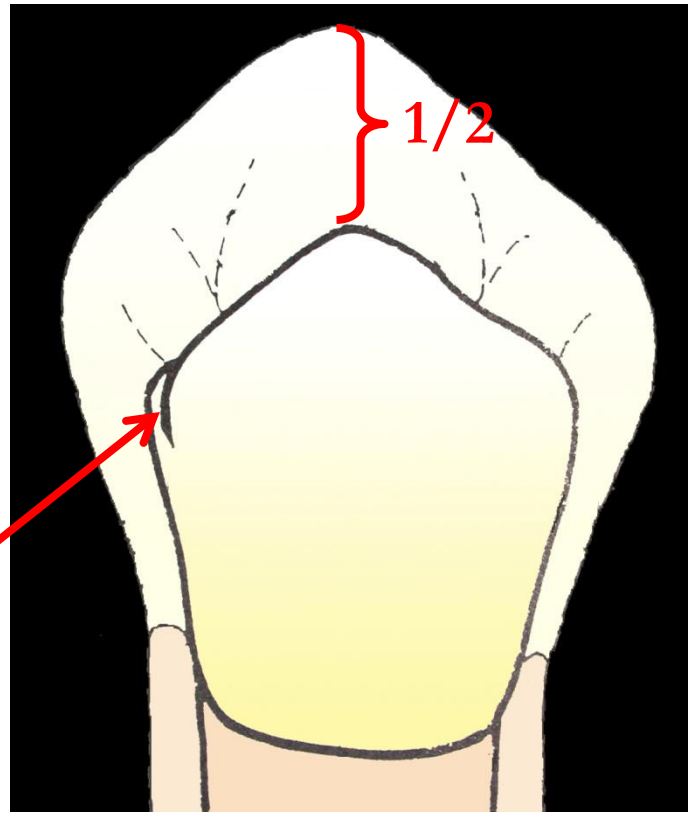
- Mesial cusp ridge < distal cusp ridge
- Cervical and middle 1/3 are more convex
- 3 lobe: central > mesial> distal
- Distal developmental groove is not prominent.
- Height of contour : Cervical 1/3





Lingual aspect

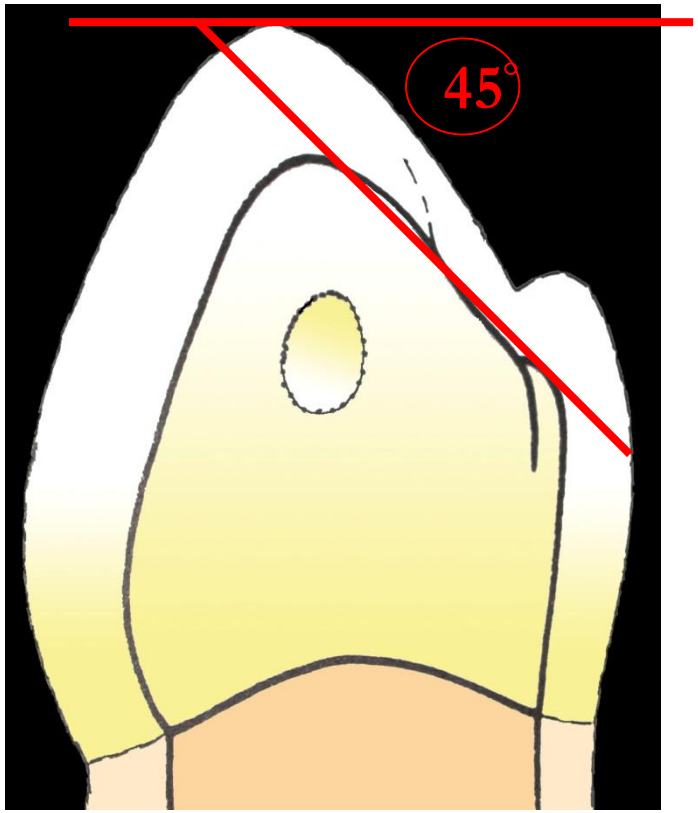
- Lingual half is ½ of buccal half
- Buccal cusp can view clearly from lingual aspect
- Occlusal table taper towards lingual aspect
- Mesiolingual groove separates mesial marginal ridge and lingual cusp





Mesial aspect

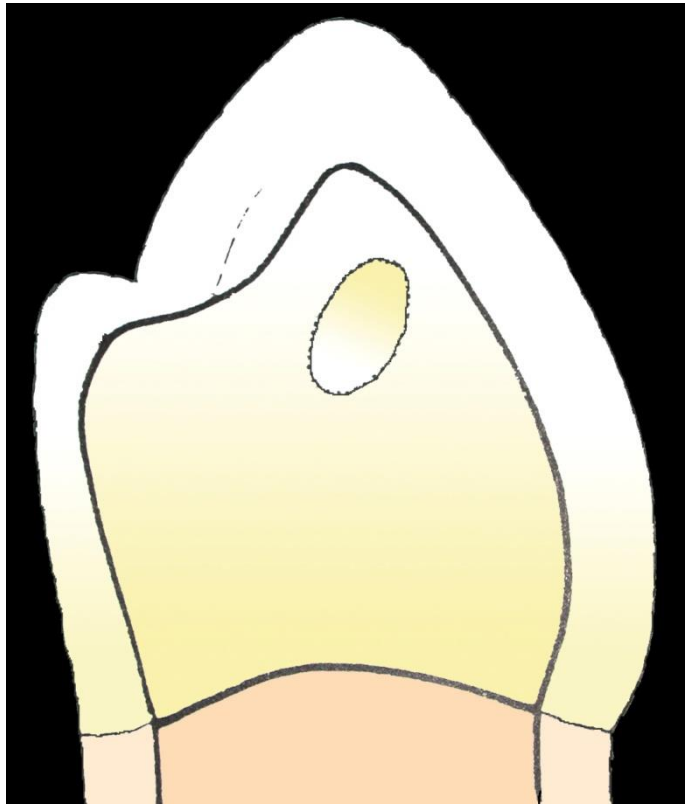
- Large buccal cusp and small lingual cusp
- Mesial marginal ridge locate 45 degree to the horizontal plane and no mesial marginal groove
- Contact area: beneath B cusp at the junction of occ 1/3 and mid 1/3





Distal aspect

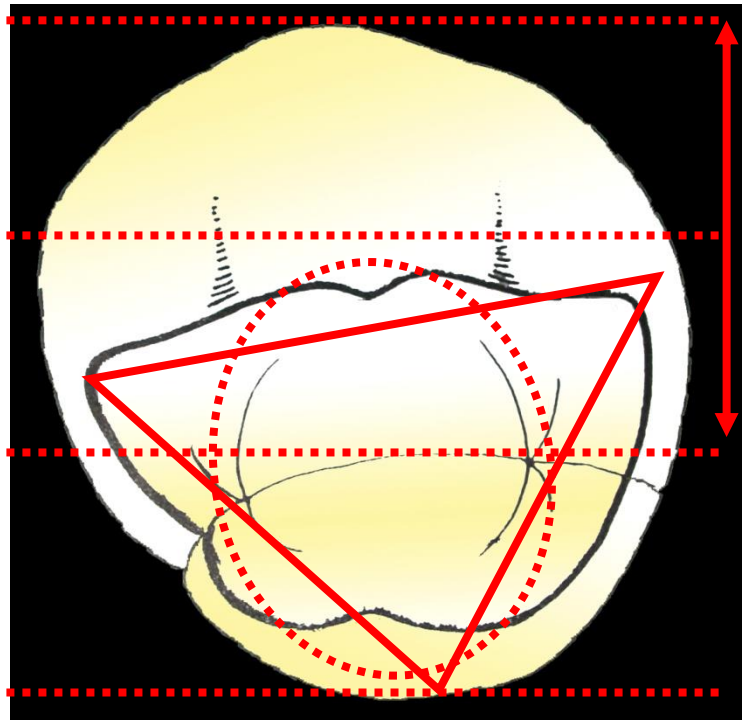
- Contact area: more broader than mesial contact area and locate more occlusally



Occlusal aspect



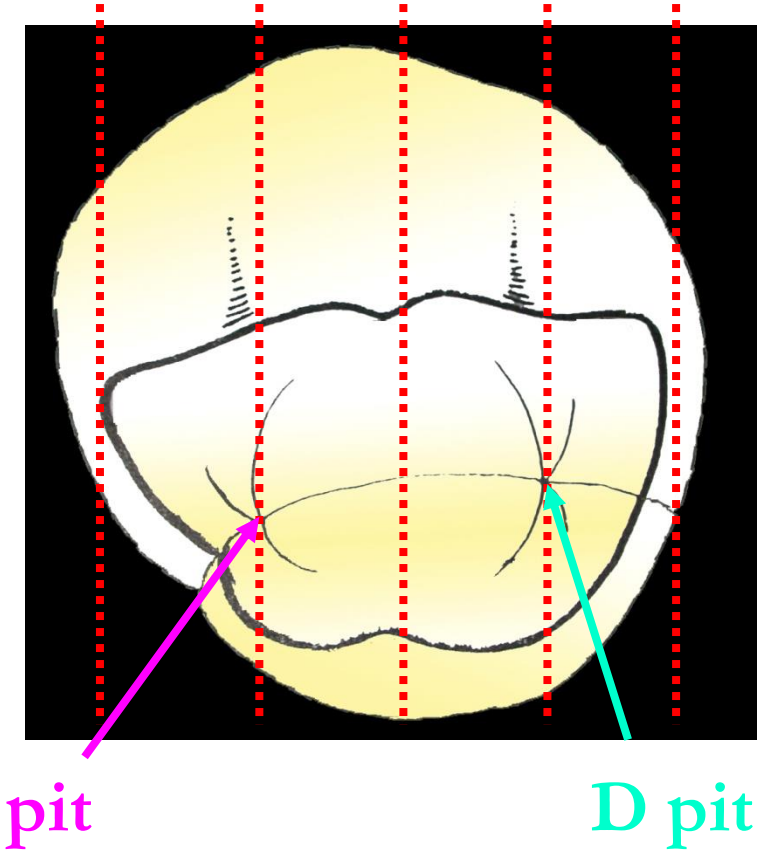
- Occlusal outline : triangular/ oval
- Occlusal table curve toward lingual side (esp. mesial border)
- B cusp is 2/3 of occ table



Occlusal aspect



- 2 pits : mesial and distal pits (about ½ of M-D width)



Occlusal aspect: Grooves

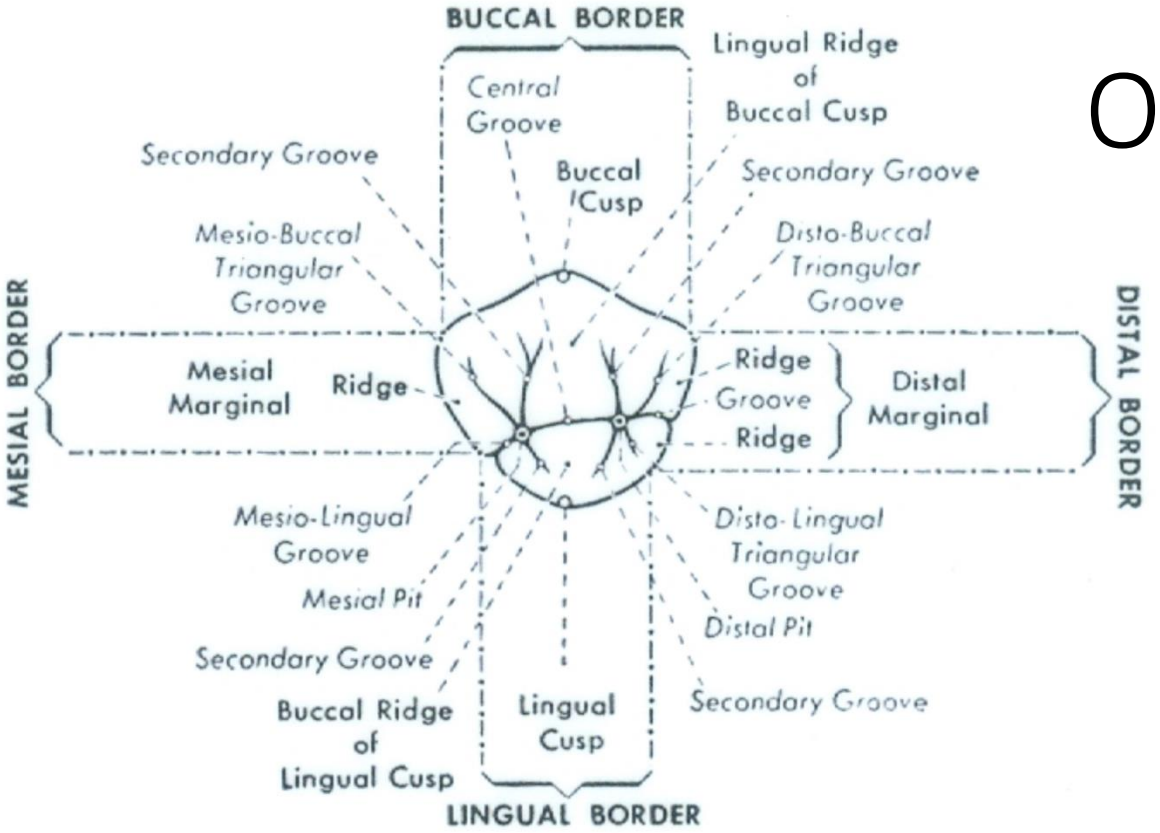
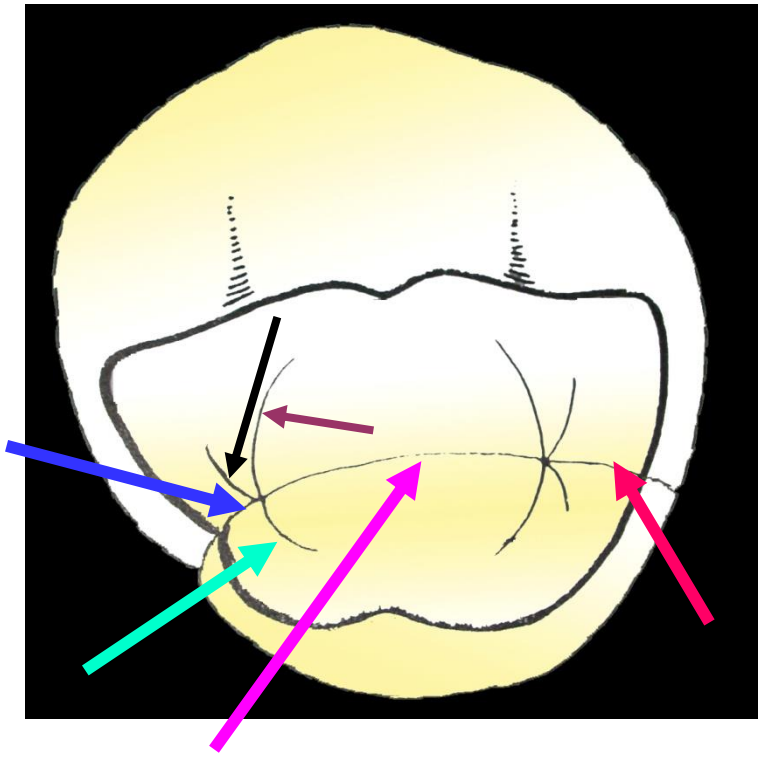
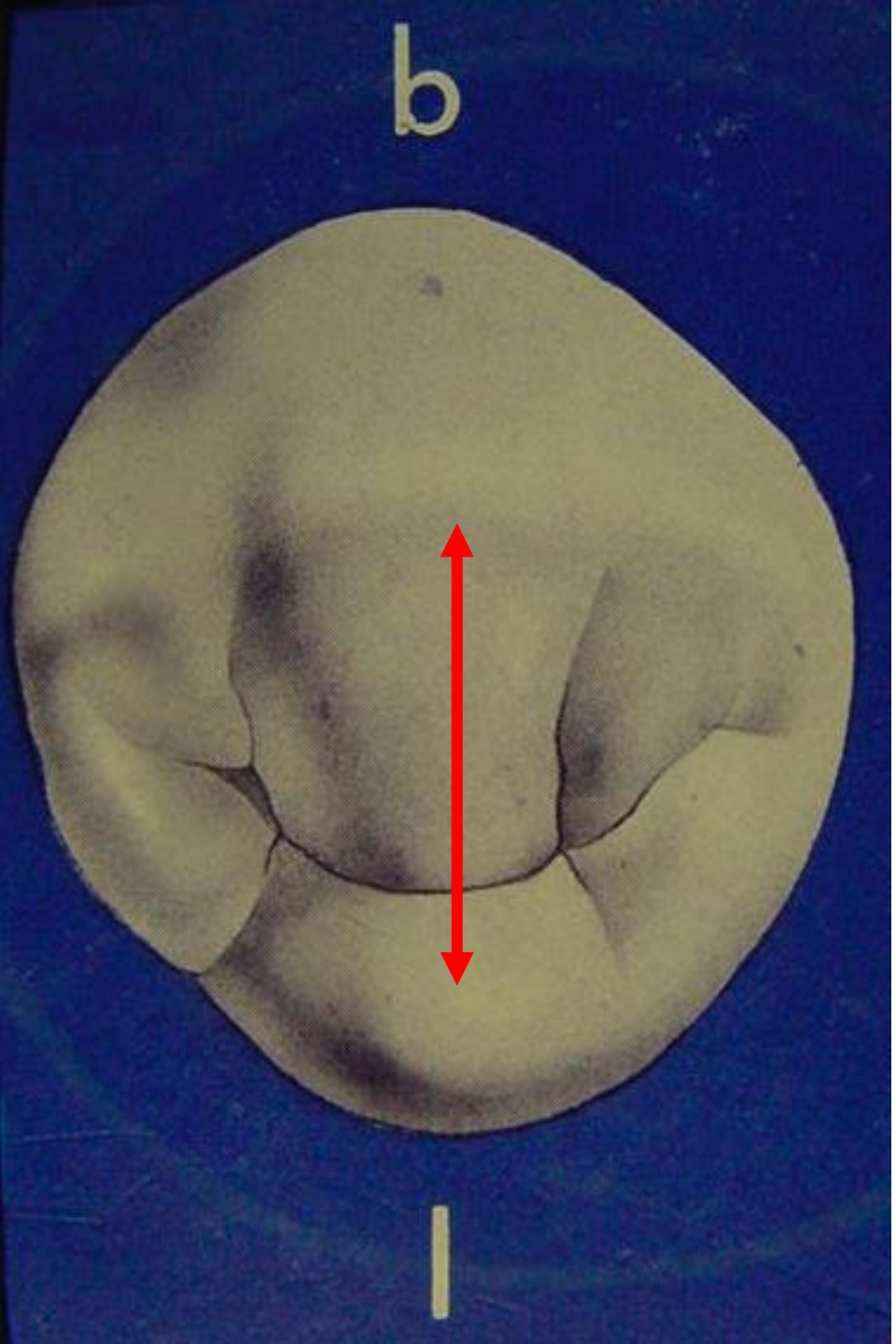


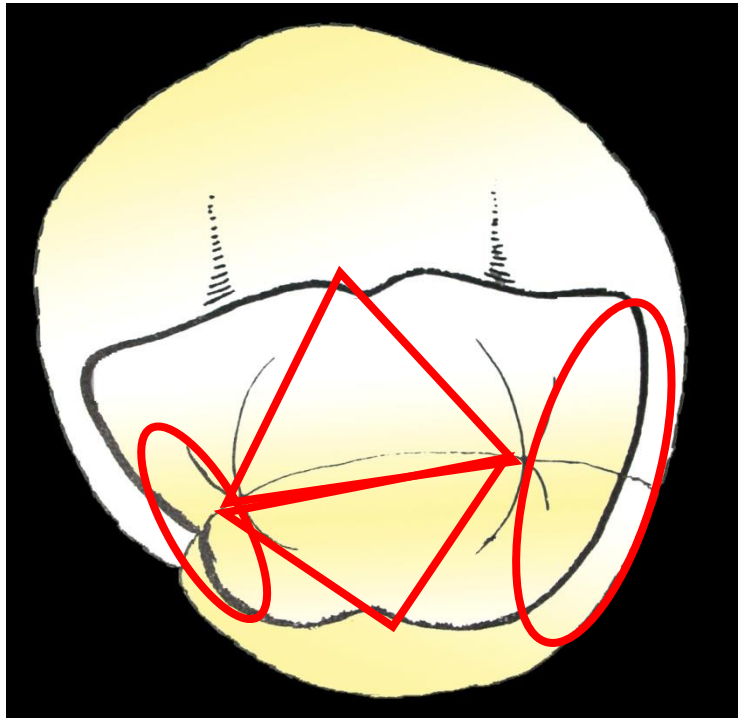
FIG. 130. OCCLUSAL SURFACE



- Central groove : deep and separates 2 triangular grooves
- Distal marginal gr: short and less developed
- No mesial marginal gr
- Triangular gr: MB and DB, MLi and DLi



Occlusal aspect

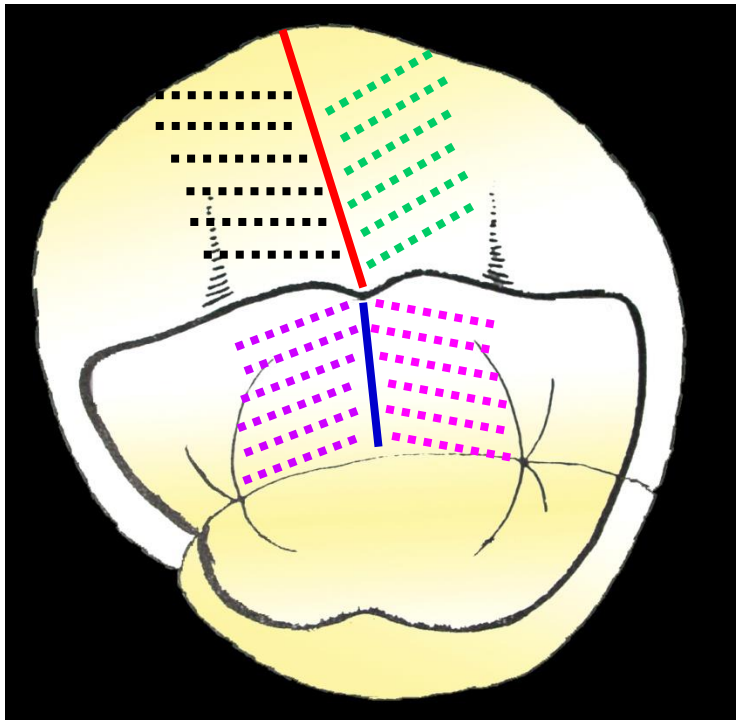


- Obvious transverse ridge
- Distal marginal ridge is 2 times longer than mesial marginal ridge.

Occlusal aspect

Buccal cusp

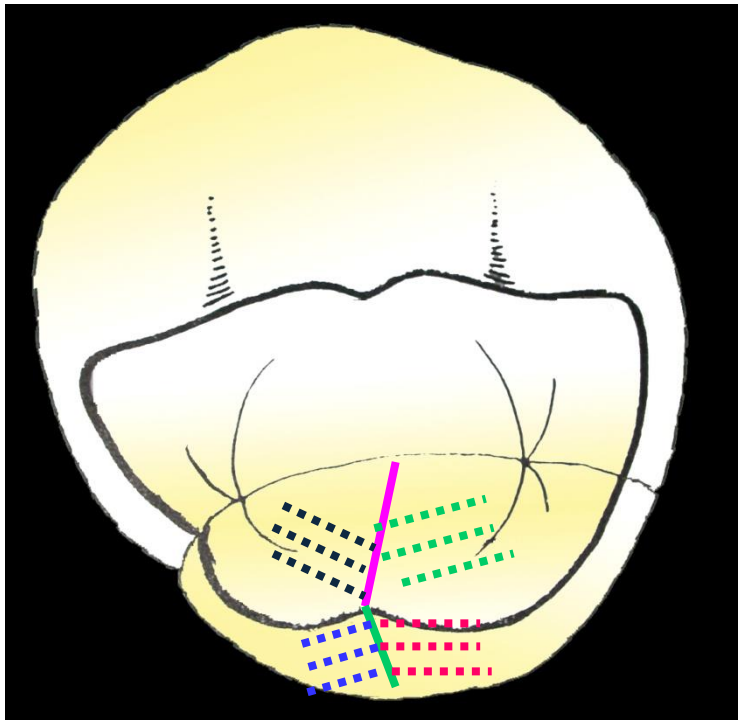
- Tip of B cusp locate at the center
- Composes of 4 inclined planes occlude to the opposing teeth except mesio-lingual inclined plane.

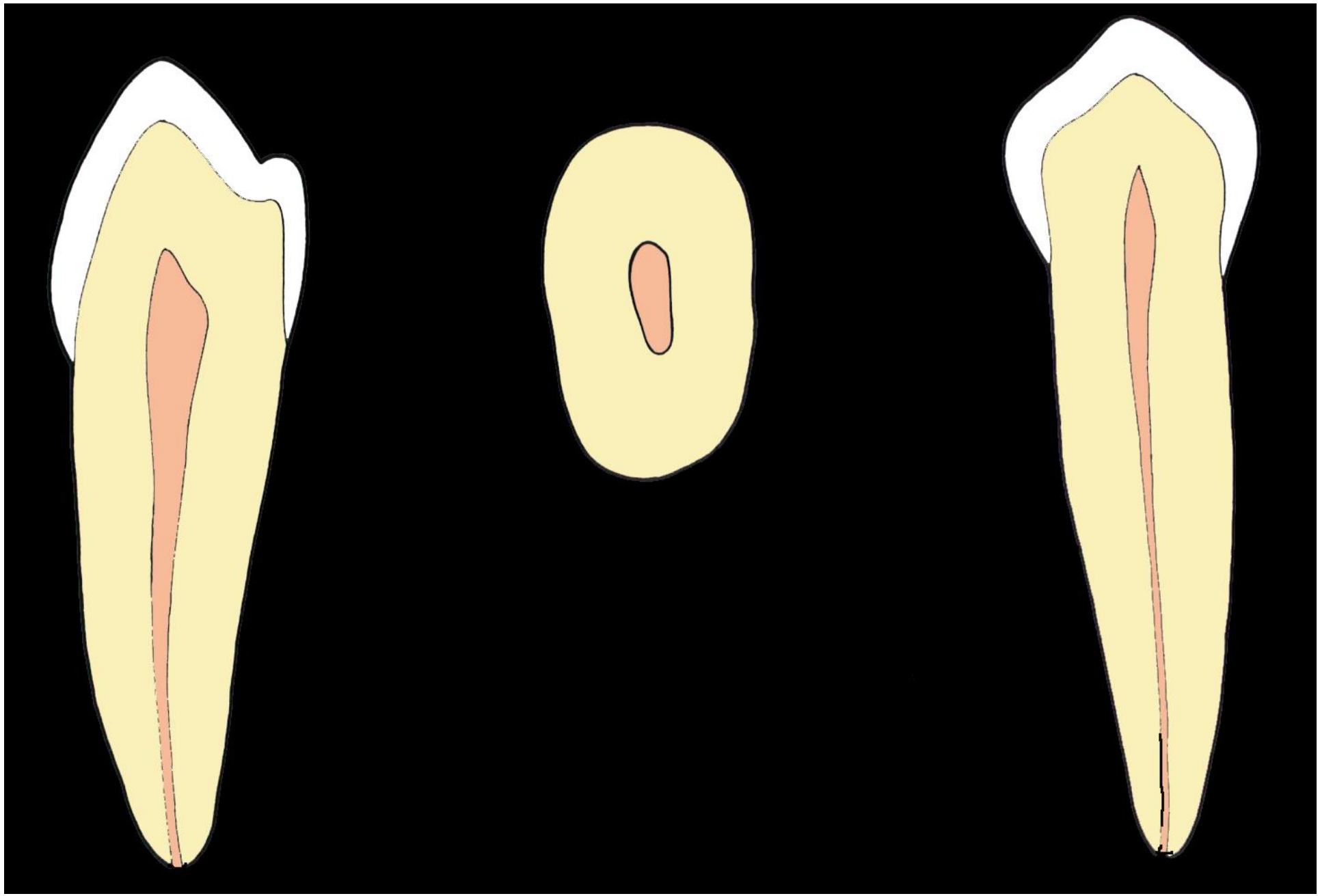


Occlusal aspect

Lingual cusp

- Small lingual cusp
- Consisted of 4 inclined planes occlude to the opposing teeth only disto-buccal inclined plane.





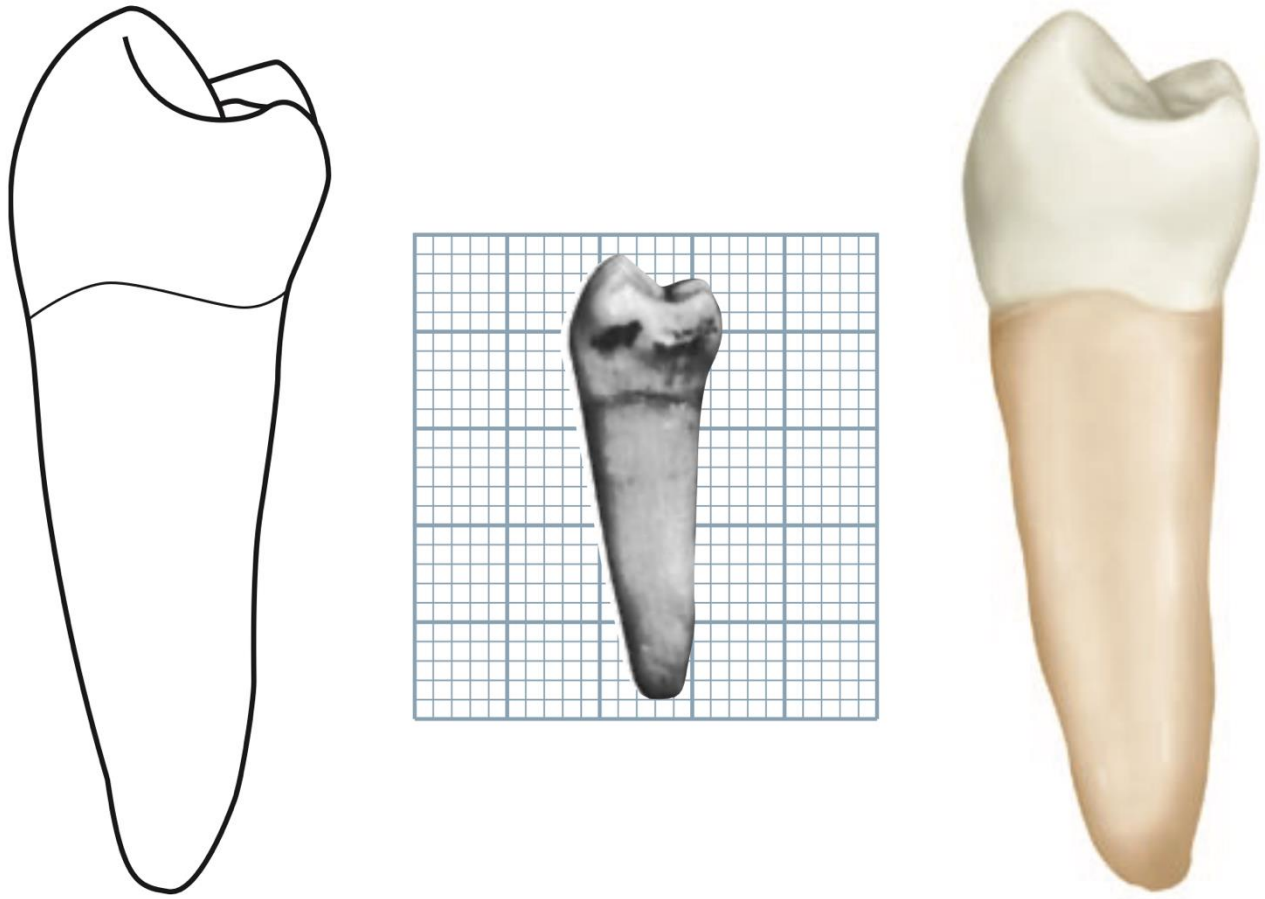


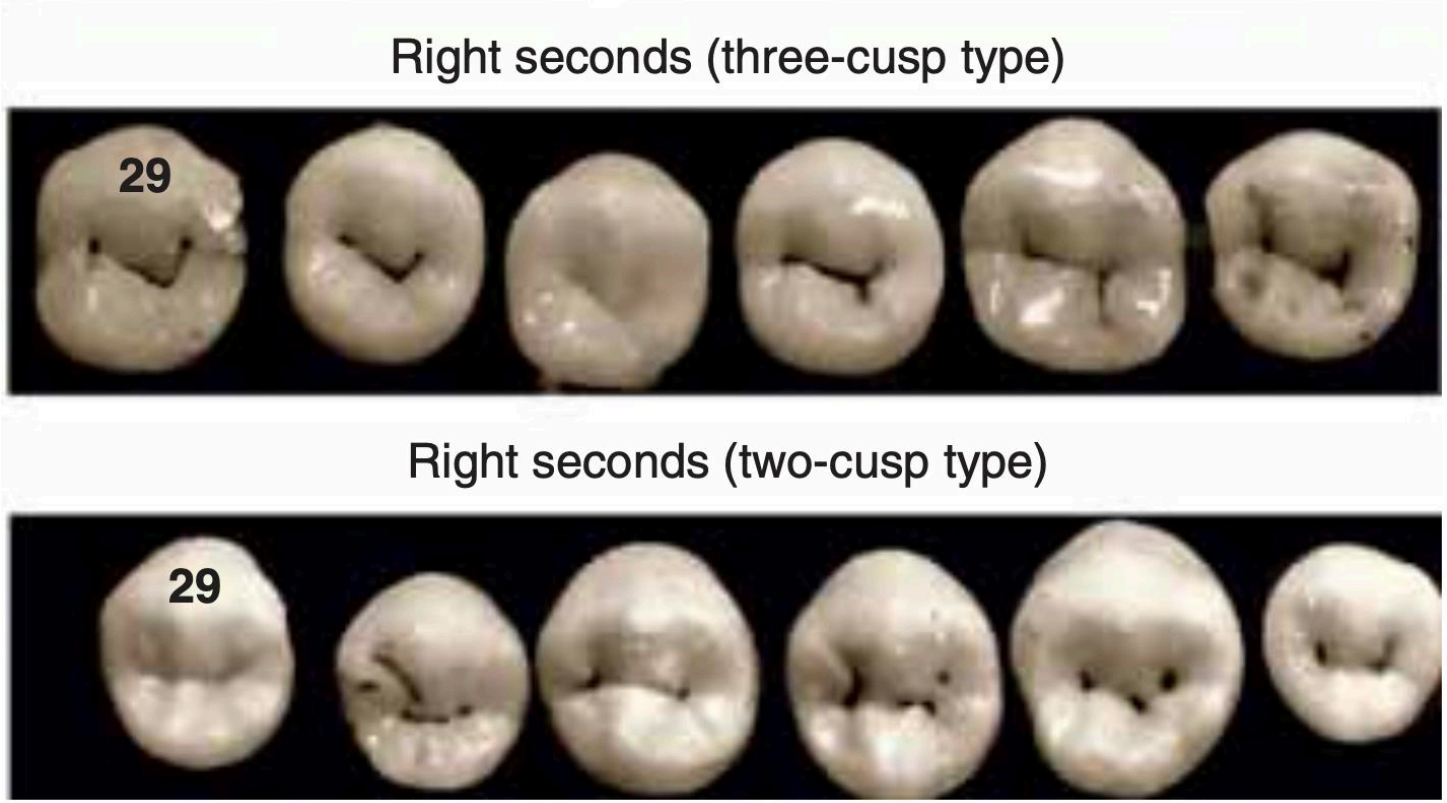
FIGURE 10-16 Mandibular left second premolar, distal aspect. (Grid = 1 sq mm.)

Mandibular Second Premolar

Mandibular Second Premolar

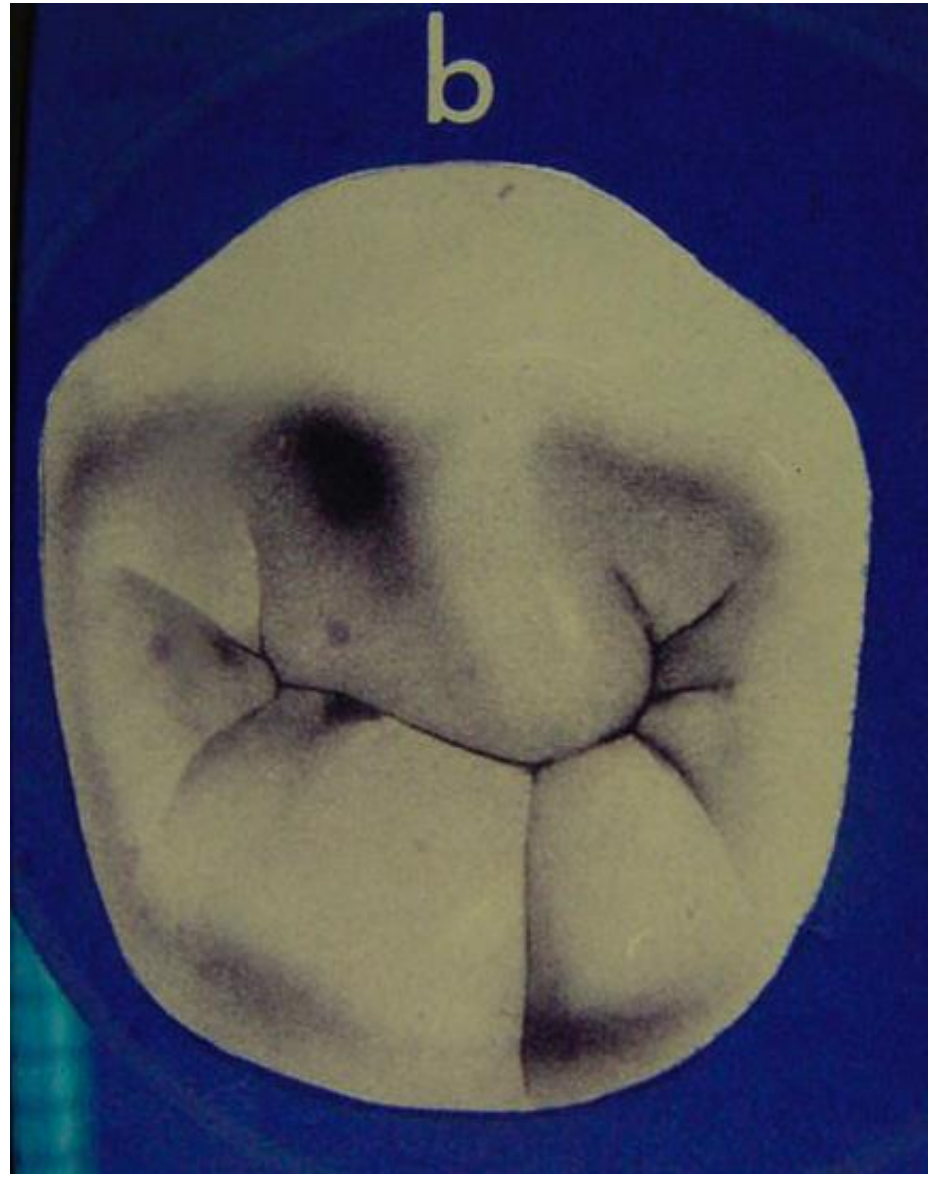
- Eruption age : 11-12 years





2 groups (classified by pit and groove on the occlusal surface)

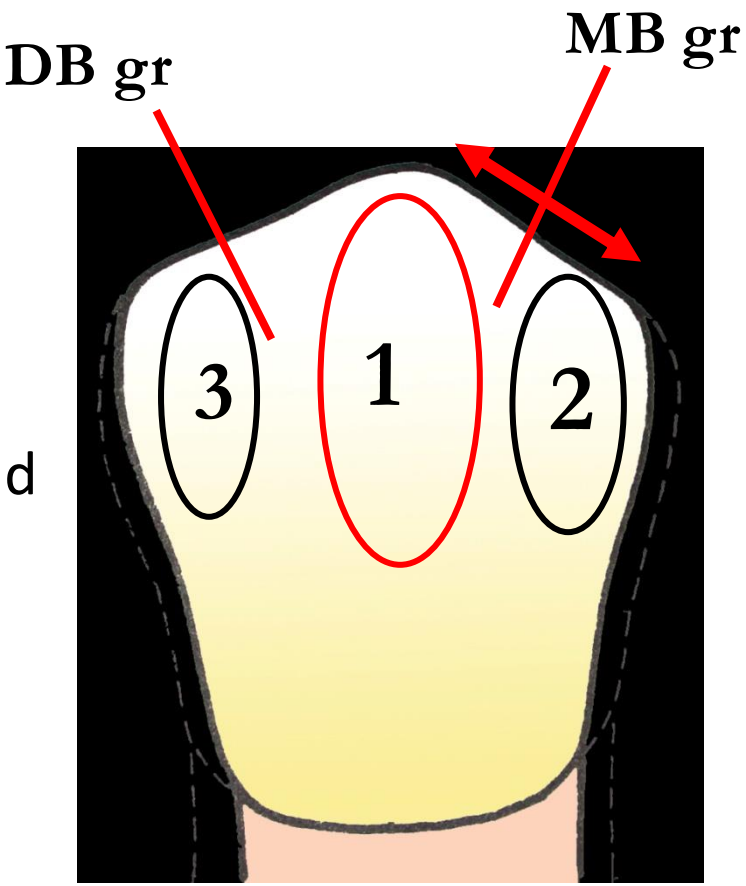
- One lingual cusp
  - H-type
  - U-type
- Two lingual cusps
  - Y-type


b



Buccal aspect

- Mesial cusp ridge < distal cusp ridge
- 3 lobe: central > mesial> distal
- MB and DB developmental grooves
- Height of contour : junction of mid 1/3 and Cervical 1/3

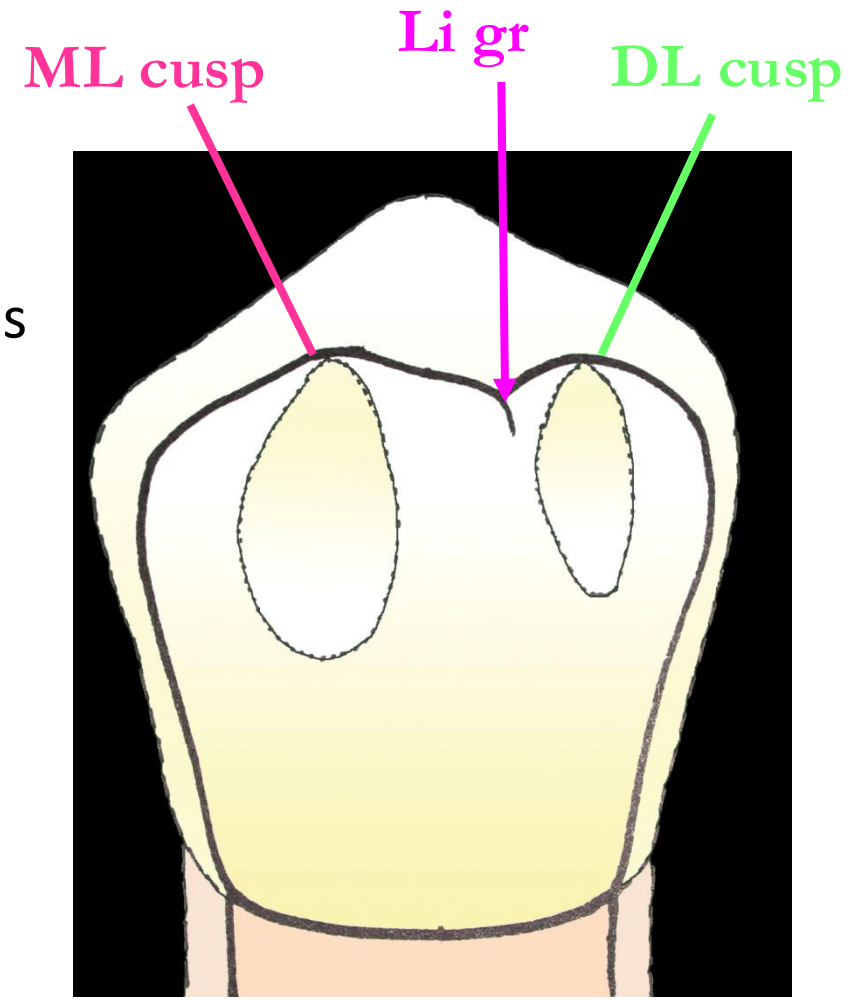




Lingual aspect

2 lingual cusps

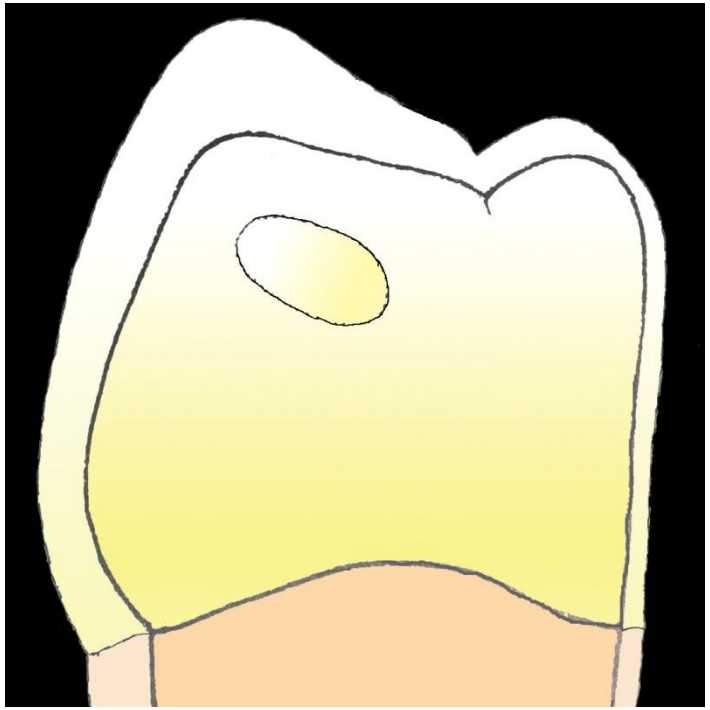
- Lingual cusps are nearly the same size as B cusp
- Consist of 2 Li cusp : MLi> DLi and separated by Li groove.
- Height of contour : occ 1/3





Mesial aspect

- Li cusp is shorter, and its tip locates to B side
- Crown and root are wider buccolingually
- Marginal ridge is right angle to long axis.
- Contact area: beneath occlusal border more to buccal side.



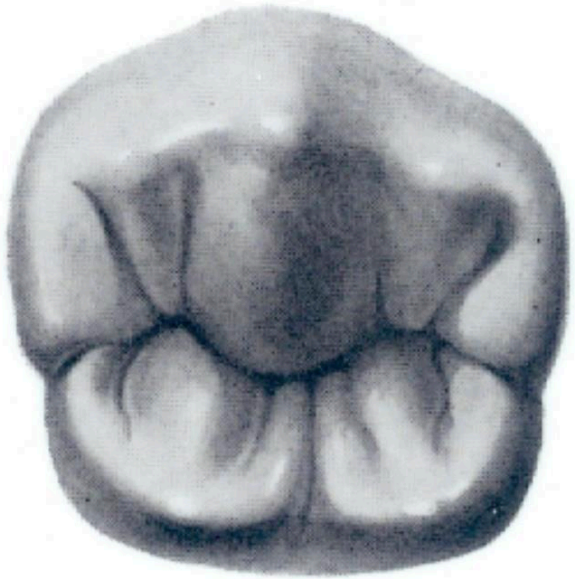


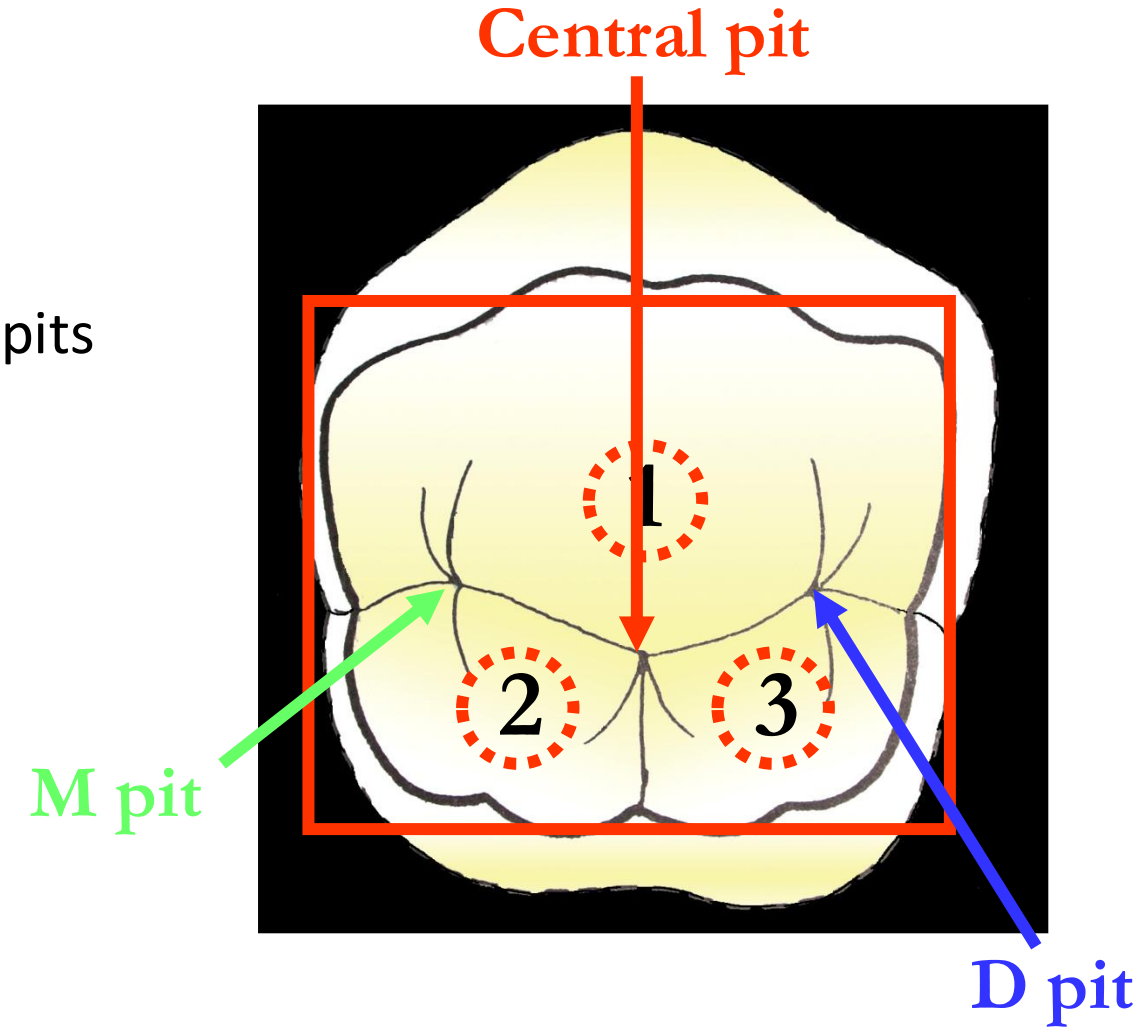
Distal aspect

- Similar to mesial aspect but can view more occlusal surface due to lower distal marginal ridge.
- Contact area is broader.

Occlusal aspect: Y-type

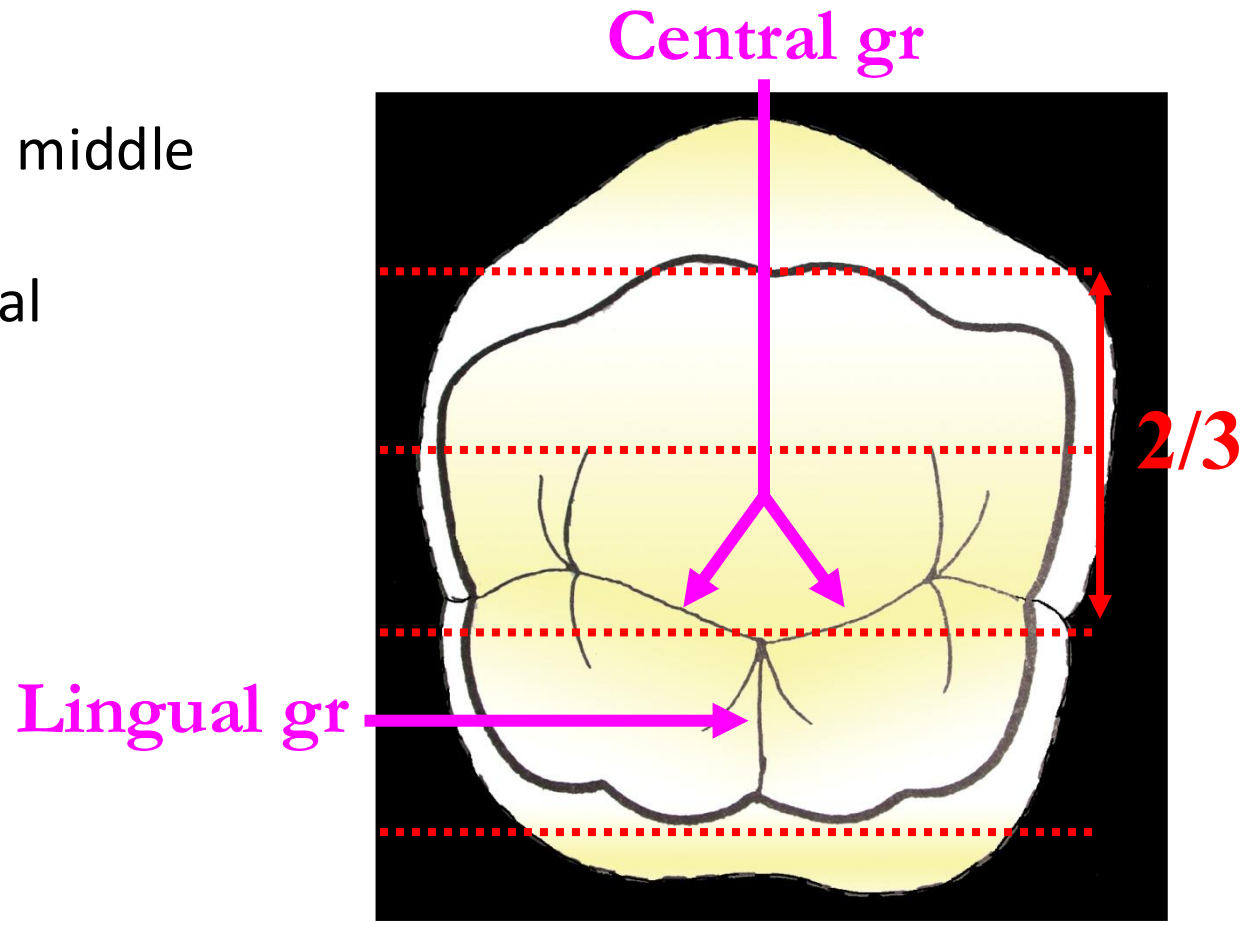
- Occlusal outline : square
- B cusp>MLi cusp> DLi cusp
- 3 pits : Mesial, central and distal pits





Occlusal aspect: Y-type

- Central pit : 2/3 BLi width and middle of MD width
  - 3 gr : 2 central and 1 lingual grooves



Occlusal aspect: Y-type

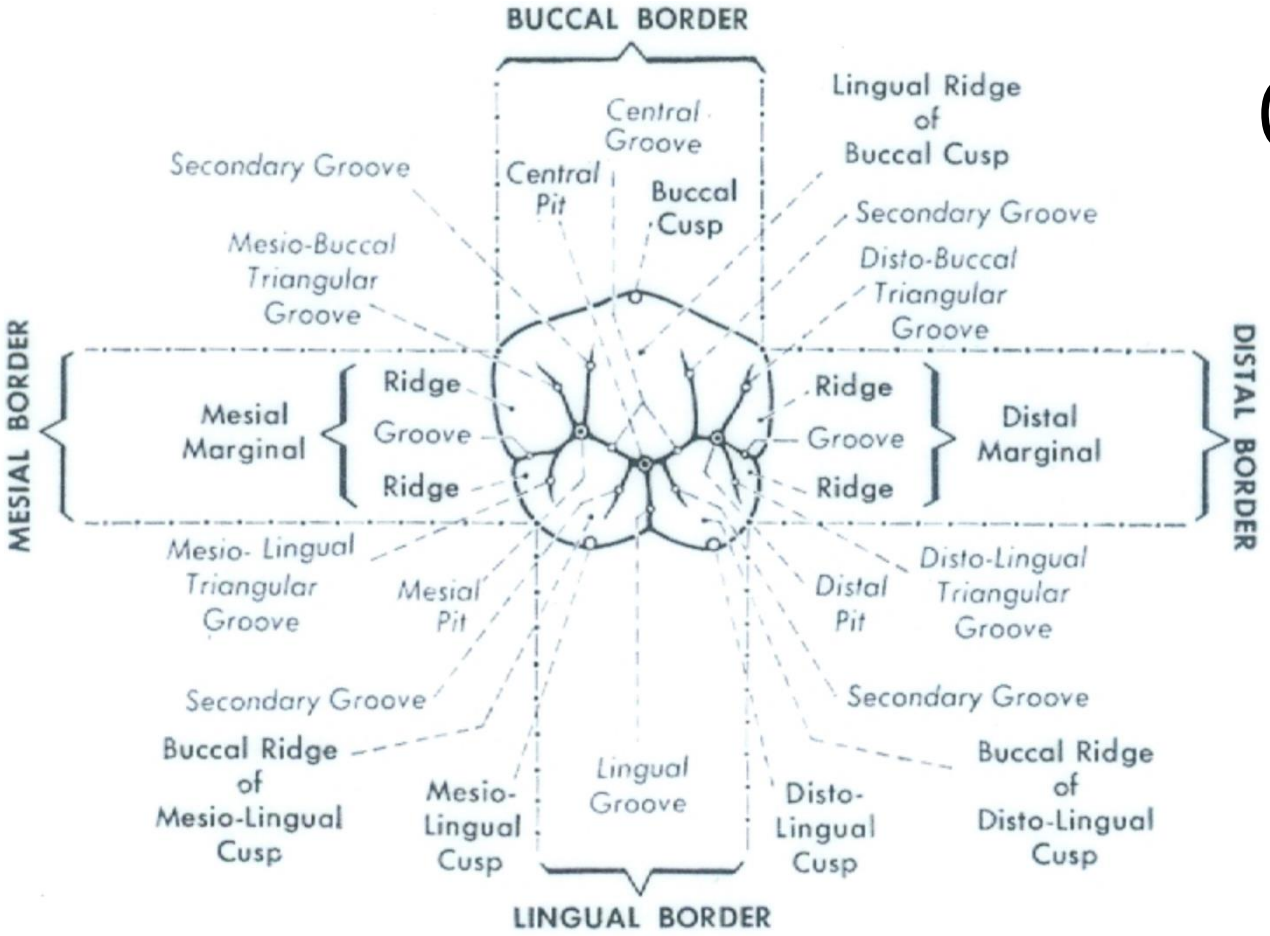
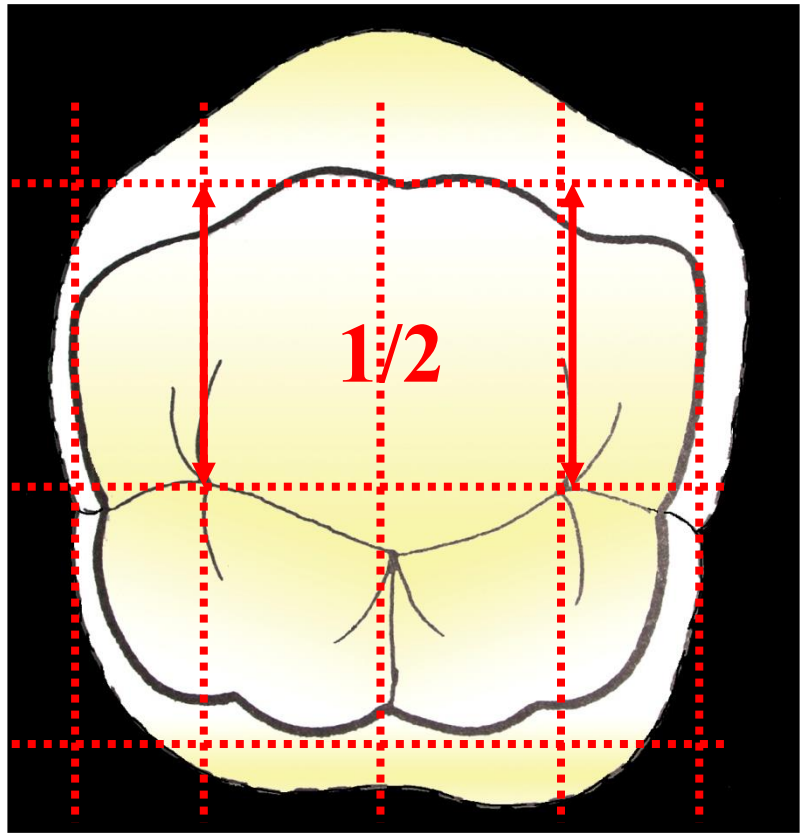


FIG. 153. OCCLUSAL SURFACE
Y TYPE



- Mesial pit : ½ B-Li width and ¼ of MD width
- 4 gr : central, MB, MLi and mesial marginal gr

Occlusal aspect: Y-type

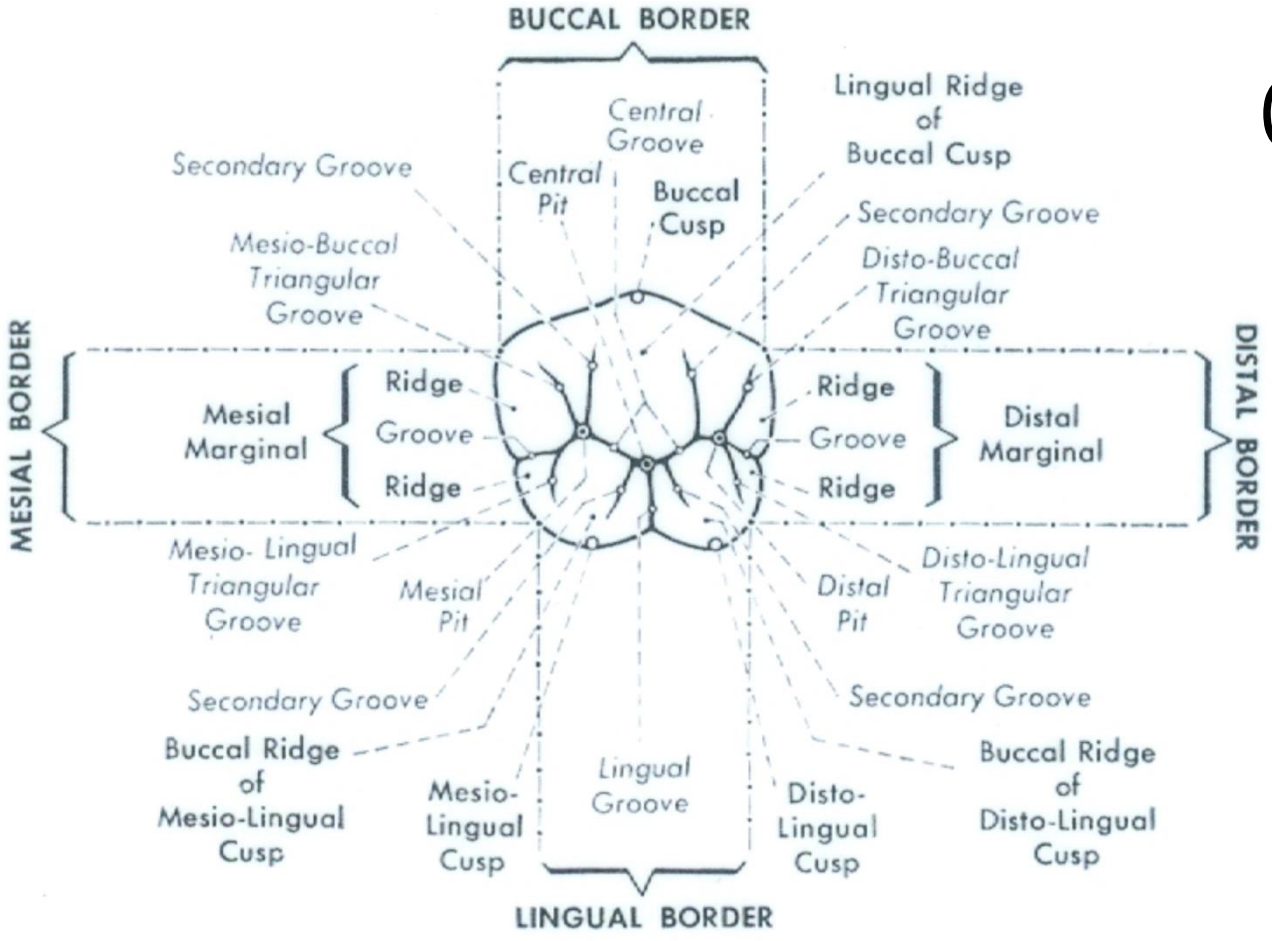
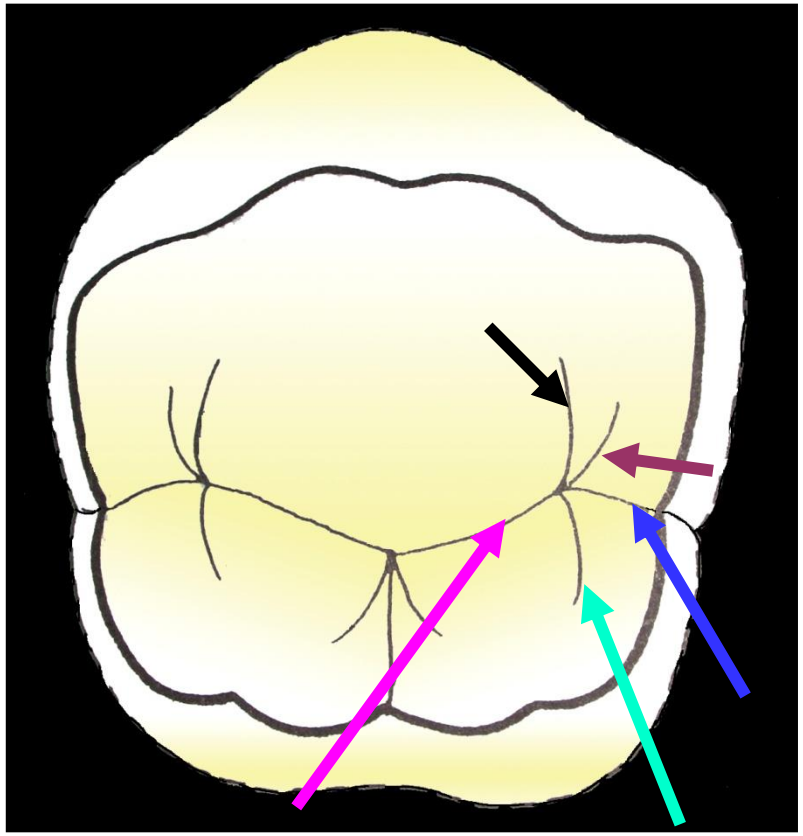


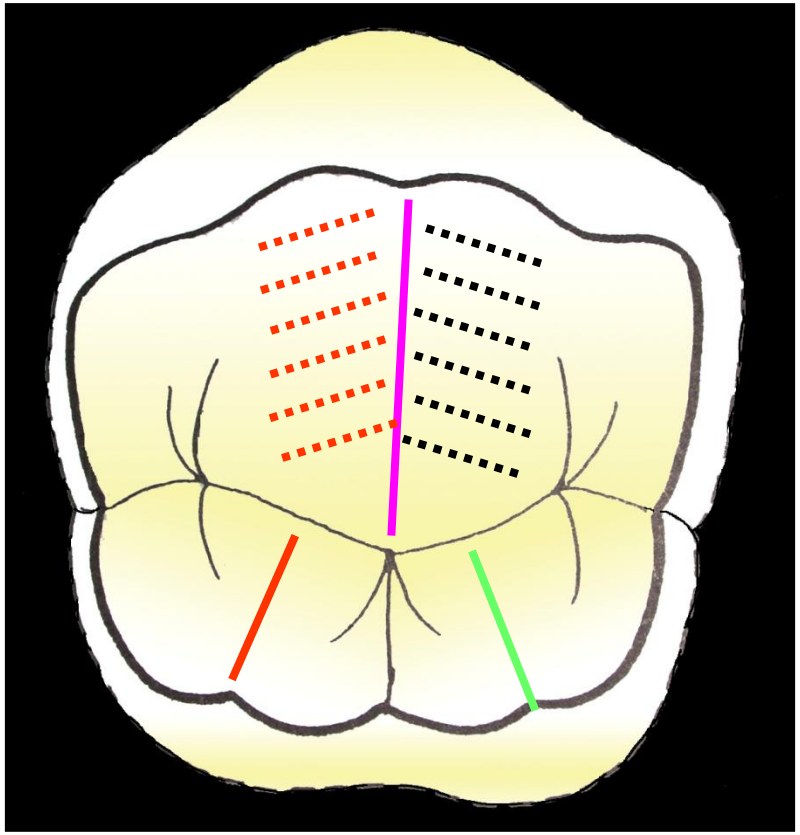
FIG. 153. OCCLUSAL SURFACE
Y TYPE



Distal pit :same as mesial pit

- 4 gr : central, DB, DLi and distal marginal gr

Occlusal aspect: inclined planes



Occlusal aspect: H-type

- Mesial and distal pits: 1/3 of MD width
- Central groove is straight
- Mesial fossa is smaller than distal fossa
- Each pit contain 4 gr.

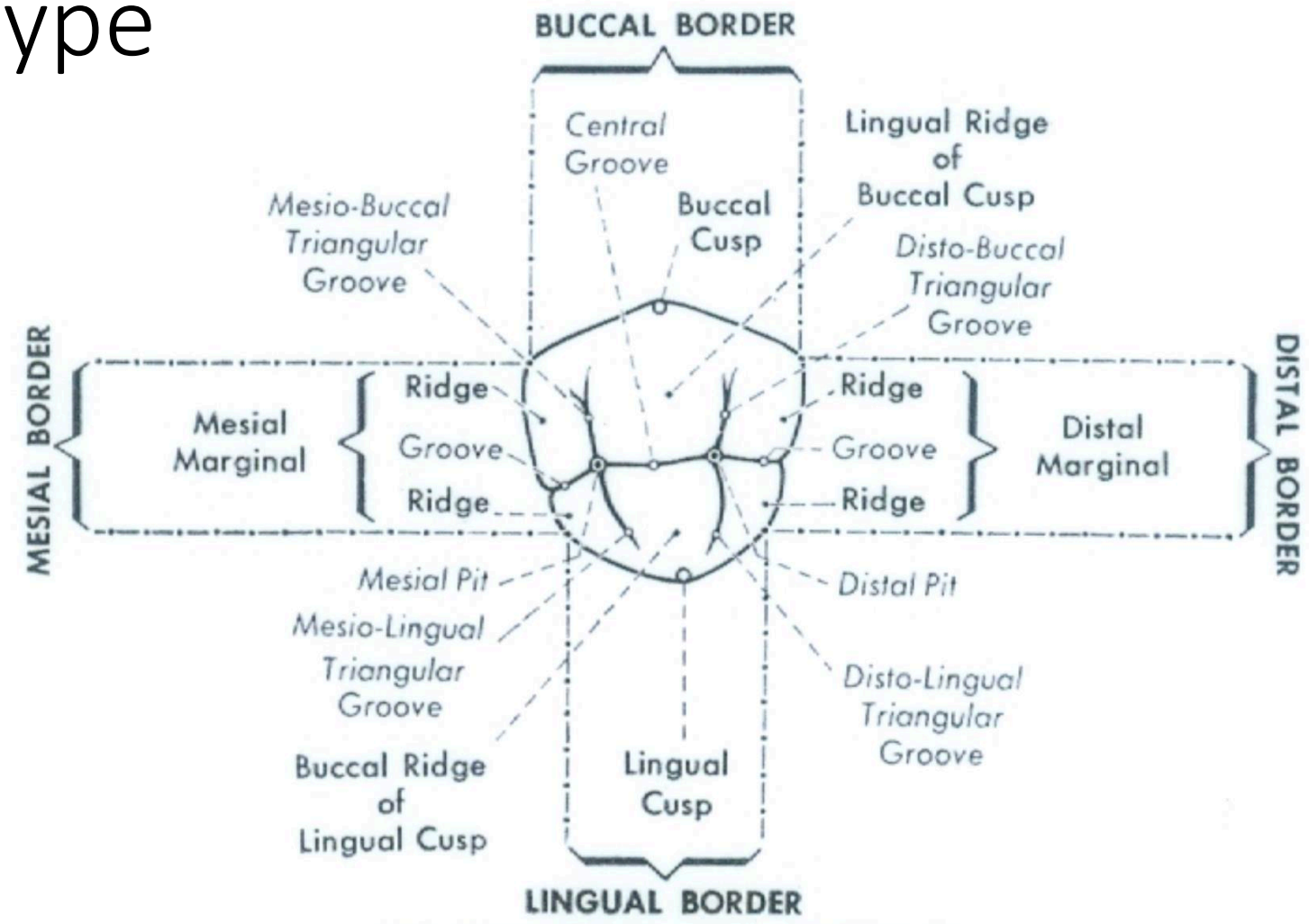


FIG. 154. OCCLUSAL SURFACE H TYPE

Occlusal aspect: U-type

- 2 pits : mesial and distal pits (1/2 MD width)
- Central groove is curved toward lingual side.
- Many secondary grooves
- Lingual cusp is shorter, round and narrow buccolingually.

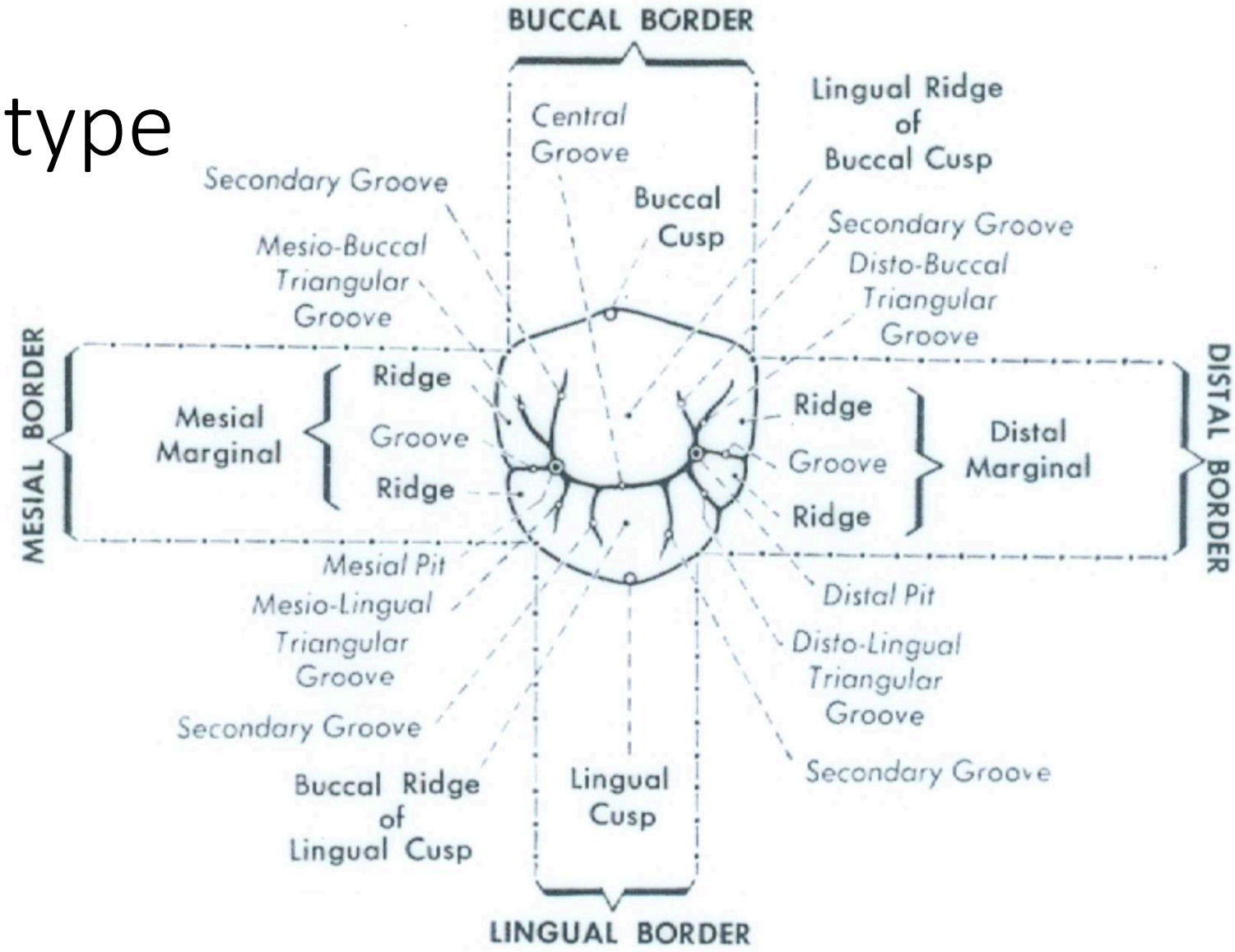
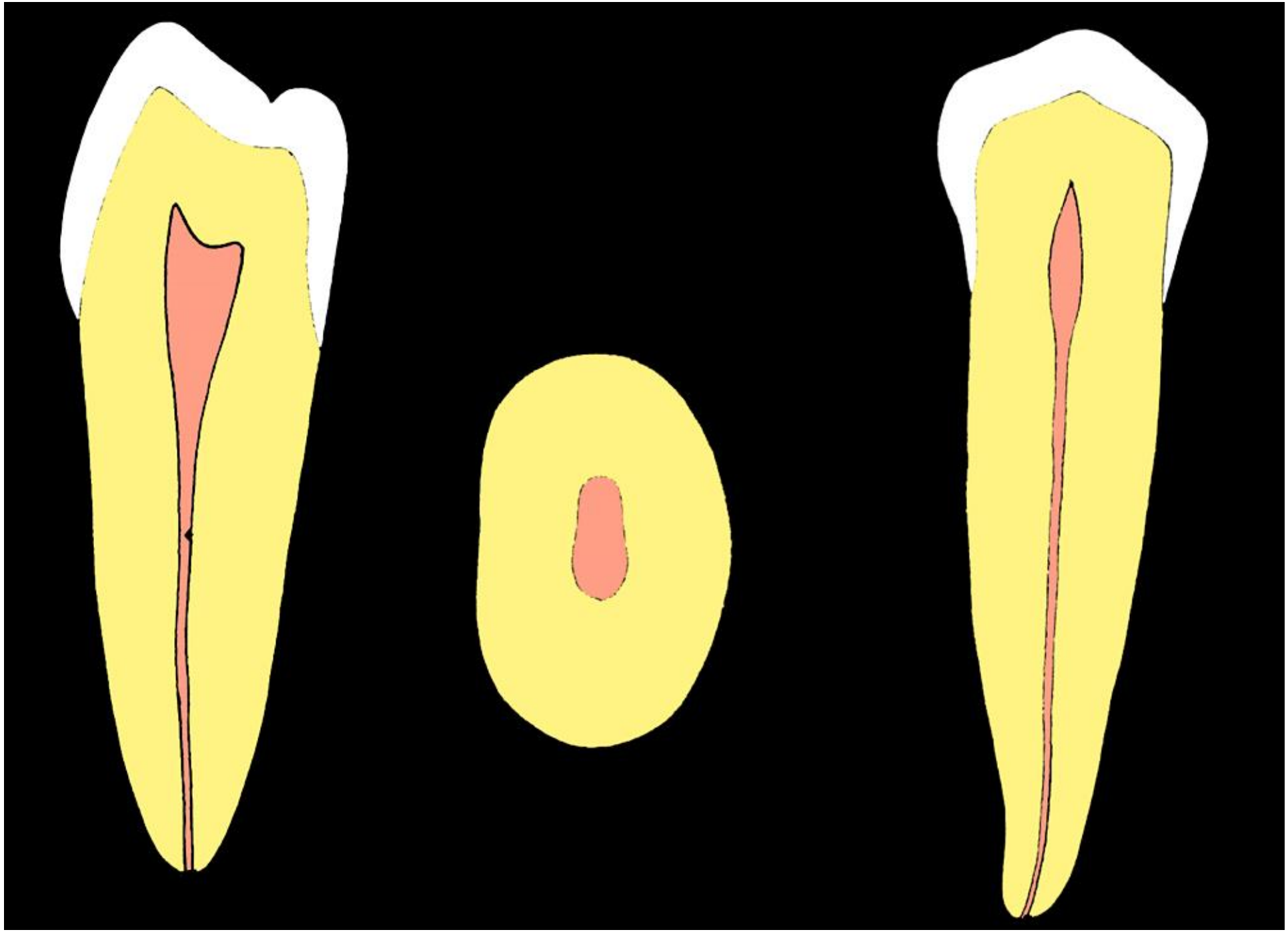
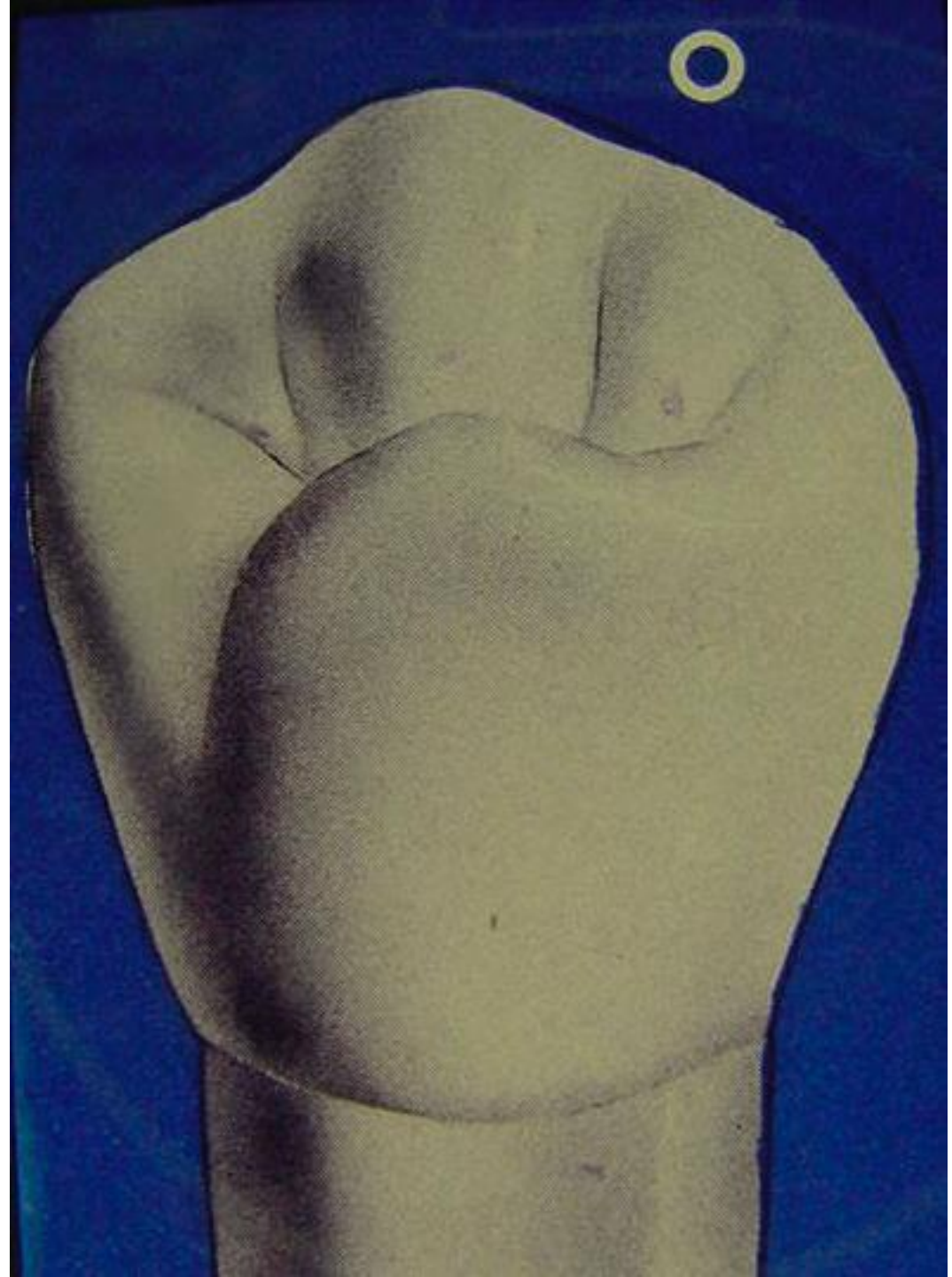
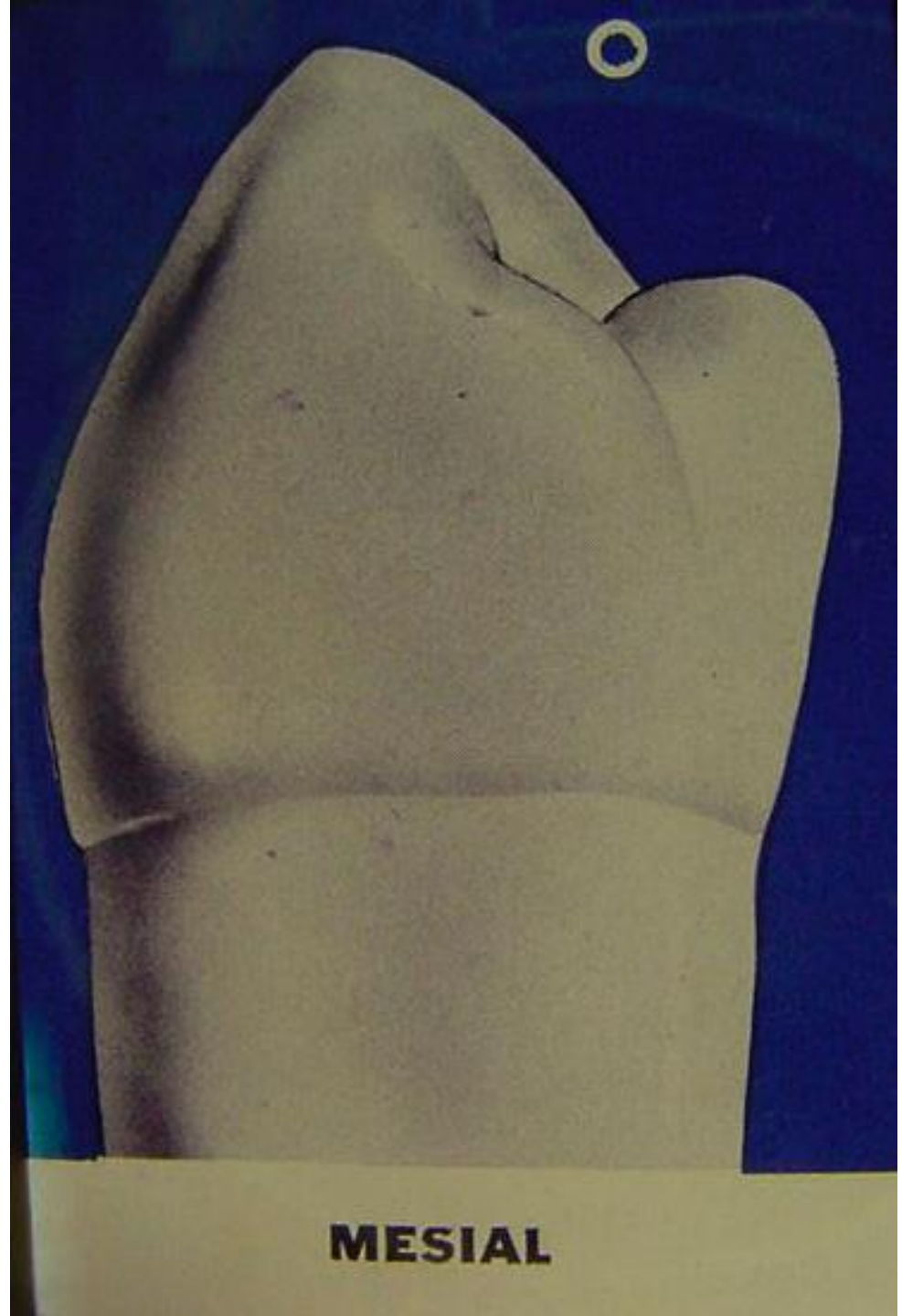
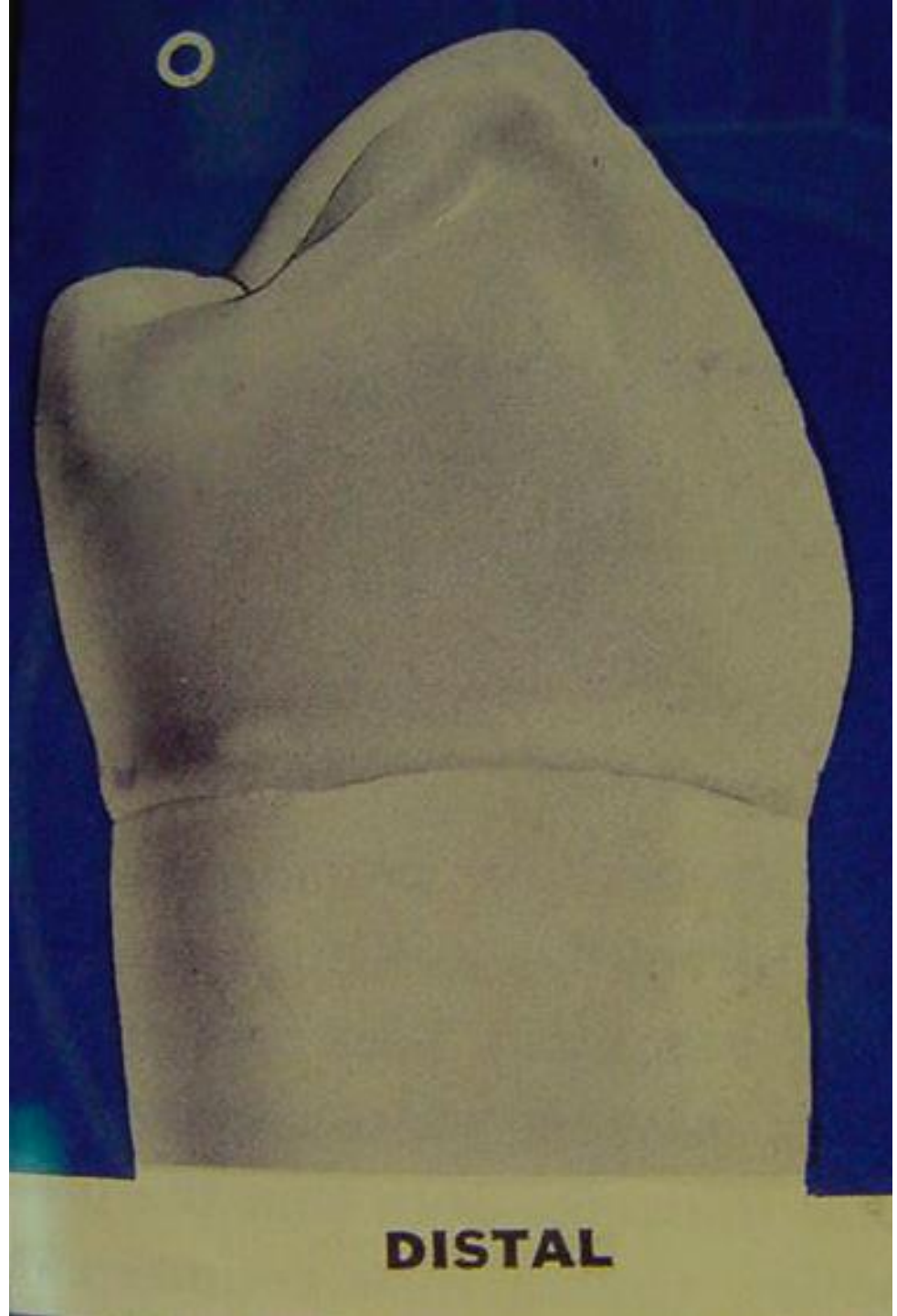


FIG. 152. OCCLUSAL SURFACE U OR CRESCENT TYPE






MESIAL


DISTAL

