Permanent maxillary second molar

Principal identifying features:

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

Buccal aspect:

1. The crown is smaller in all dimensions than max. first molar.
2. The disto-buccal cusp is smaller and allows part of distal marginal ridge and part of disto-buccal 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 max. 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 max. first molar.
2. No fifth cusp.
3. The apex of palatal root is in a line with disto-lingual cusp tip.

**Mesial aspect:**

1. Bucco-lingual dimension is the same as that of max. 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 that of max. first molar.

**Occlusal aspect:**

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

**Max. third molar**

**Principal identifying features:**

1. It’s the smallest of max. 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.
**Maxillary second molar**

- Buccal
- Mesial
- Occlusal
- Distal
- Lingual

**Maxillary third molar**