|  |  |  |  |  |
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| **Permanent Tooth** | **11** | **12** | **13** | **14** |
| **Vital Characteristics (first)** | * Wide M-D, almost as high as crown height. (Square)
* M-I angle 90° rounded on D-I
 | * Slightly wider M-D than crown height (more rectangle)
* M-I angle 90° rounded on D-I
 | * Bell shaped, prominent cingulum
* M cusp slope is shorter than D cusp slope
* Distal portion is wider/more concave
 | * Hexagonal from the occlusal aspect
* May have two roots (bifurcation)
* Mesio-marginal ridge
* M cusp slope longer than D cusp slope (exception)
 |
| **Important Characteristics** | - M-D diameter is greater than La-LIi | - Incisal edge twists- More asymmetrical | - Tip of cusp is centred La-Li | * B and P cusp heights are quite equal, B slightly larger.
* Much larger and more prominent cusps than Md
 |
| **Minor details (last)** | * Roots are rounded/triangular in cross-section
* Roots twist/curve distally
 | * Roots are rounded/triangular in cross-section
* Roots twist/curve distally
 | * Root may curve mesially or distally
* Root wider M-D than La-Li
 | * Roots twist/curve distally
 |

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| **Permanent Tooth** | **41** | **42** | **43** | **44** |
| **Vital Characteristics (first)** | * Crown height greater than M-D (tall rectangle)
* Very prominent cingulum
* Symmetrical, parallel M and D edges
 | * Incisal edge twists distally
* Prominent cingulum
* Slightly wider and longer than centrals
* Distal contact areas are generally slightly curved
 | * M-D edges are parallel
* Smaller cusp height than Mx
* M cusp slope shorter than D cusp slope
* D portion more concave
 | * Li cusp much smaller than B cusp
* Rounded diamond from O aspect
* Li tilt
* M cusp slope shorter than D cusp slope
* Transverse cusp ridge towards mesial (M-L groove)
 |
| **Important Characteristics** | * Flattened M-D root cross-section
* Distal may be more cervical
 | - More fan-shaped- More asymmetrical than centrals | - Flattened cingulum- Cusp occupies ¼ to 1/3 of crown height | * Rhomboidal from proximal view
 |
| **Minor details (last)** | * Roots twist/curve distally
 | * Roots twist/curve distally
 | * Root is wider La-Li than M-D
* Root may curve distally or mesially
 | * Roots twist/curve distally
 |
| **Permanent Tooth** | **15** | **16** | **17** | **18** |
| **Vital Characteristics (first)** | * 2/3 cusp height (1 B, ½ Li)
* D-Li groove
* Cusp height similar
* M cusp slope shorter than D cusp slope
* Significant lingual tilt
 | * Oblique ridge from D-B to M-P
* 2 Pa cusps often longer than 2 Bu cusps
* May have Crabelli’s cusp (MePa)
 | * Slightly smaller than 6
* 4 cusps
* M-P cusp is the largest
* ??
 | * Heart shaped
* Very variable
* If doesn’t look like standard 6 or 7.
 |
| **Important Characteristics** | * Symmetrical slopes
* Li cusp more mesial
 | * Anterior developmental groove (L shape)
* Palatal groove than often ends in a pit
 | - Anterior developmental groove (L shape) | * Roots often fused
 |
| **Minor details (last)** | * 1 root
* Roots tend to curve distally
 | * 3 roots (2 B, 1 P)
* Roots tend to curve distally
 | * 3 roots (2 B, 1 P)
* Roots tend to curve distally
 | * 3 roots
 |

|  |  |  |  |  |
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| **Permanent Tooth** | **45** | **46** | **47** | **48** |
| **Vital Characteristics (first)** | * Buccal and lingual cusps are more equal
* 2/3 cusps (D-L is smallest)
* Square shaped
* H pattern on occlusal aspect
 | * 5 cusps (3 B, 2 Li)
* M-B > D-B > other cusps
* Rounded on the distal aspect
 | * Smaller than 6
* 4 cusps (2 B, 2 Li)
* M-B cusp is largest
* Hot cross bun
 | * More rounded occlusal aspect
* Extra grooves
* Distal surface usually more convex than mesial
 |
| **Important Characteristics** | * M cusp slope is

shorter than D- Li cusp more mesial |  | * Distal surface usually more convex than mesial
 | * Often fused roots
 |
| **Minor details (last)** | * Roots twist/curve distally
* 1 root
 | * Roots twist/curve distally
* 2 roots (M, D)
 | * 2 roots (M, D)
 | * Roots twist/curve distally
 |