



## CMG GardenNotes #618

# Homework ANSWERS: Pruning

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1. Describe the following terms:

- a) Branch bark ridge.  
**Where the bark of the branch and trunk come together, forming a ridge.**
- b) Branch collar.  
**Where the growth rings of the trunk and the growth rings of a branch intergrow, forming a more-or-less pronounced raised area that contains the cells that will do the work of wound sealing.**
- c) Reaction zone.  
**The portion of wood that the tree attempts to seal off in order to prevent decay from spreading from a wound throughout the trunk.**
- d) Branch defense zone.  
**The cells within the branch collar activate the growth of callus tissue to overgrow a pruning cut (or another wound).**

2. Define and draw the following pruning methods:

- a) Structural/subordinate pruning.  
**Pruning to help a juvenile tree attain structurally sound mature form.**
- b) Heading.  
**Shortening a branch to a point where either 1) no other branch is growing, or 2) the side branch is less than one-third the size of the branch being removed.**
- c) Thinning.  
**Removing a smaller branch back to the point of attachment with a larger branch or trunk. Used to improve light penetration and air circulation into the canopy and to prevent limbs from occupying the same space.**
- d) Raising or "Limbing Up."  
**Removing temporary branches as a tree grows, ultimately leaving the permanent structural branches as the lowest branches of the tree.**
- e) Reduction.  
**Removing a branch to an attachment point with a smaller branch, at least one-third the size of the branch being removed. Reduction cuts are mostly used during the training of young trees in order to subordinate temporary branches.**

3. Describe in your own words, the three-cut pruning technique. Why is this method important to follow exactly?

**Undercut the branch to be removed several inches out from the position of the final cut. Next, cut the branch just outside this undercut to remove the majority of the branch. Last, make the final cut at the correct pruning location to promote wound sealing. Following the tree-cut method prevents bark tear-outs and allows more precise positioning of the final cut.**

4. Evaluate the tree below and draw where you would make your pruning cuts:

**One possible solution is below. Remove closely spaced branches and branches with narrow branch unions over those with wide unions trying to grow in the same space. Remove one-third, shorten one-third, and leave one-third of water sprouts. Only shorten/remove branches back to a union with another branch or the main trunk.**

