Geologic diagrams from various sources. Order is from <u>oldest to youngest</u>. On the exam, check to see what order I am asking for!



I: C - B - A - tilting - erosional unconformity (angular) - G - F - E (dike)
II: E - erosional unconformity (paraconformity) - C - B - A - fault - erosional unconform

E - erosional unconformity (paraconformity) - C - B - A - fault - erosional unconformity (paraconformity) - D



- III: G E F folding D (dikes) tilting erosional unconformity (angular) C B [H (dike) then tilting or tilting then H (dike)] erosional unconformity (angular) A
- IV: C B D folding erosional unconformity (angular) G F E (dike) fault erosional unconformity (paraconformity) I H



On the left-side diagram, the igneous sill, X, must have intruded after the deposition of units 2 and 1 (from principles of inclusions). Using the law of superposition, we can say that unit 1 was deposited before unit 2. On the right-side diagram, using principle of inclusions, we know that unit was deposited, then came the igneous rock, then finally unit 2 (since it contains Y and 1).



Order from oldest to youngest: A - B - WW' (angular unconformity) - C - D - E - G (dike; came after E since it contains, includes, part of E) - F - ?tilting - fault XX' - YY' (angular unconformity) - H - I (dike) - ZZ' (paraconformity) - J - K (lava flow) - L.



FIGURE 7.11 Geologic cross section for relative age analysis. Place letters on the lines along the right side of the cross section to indicate the relative ages of the rock units, from oldest (first) to youngest (last).



FIGURE 7.12 Geologic cross section for relative age analysis. Place letters on the lines along the right side of the cross section to indicate the relative ages of the rock units, from oldest (first) to youngest (last).