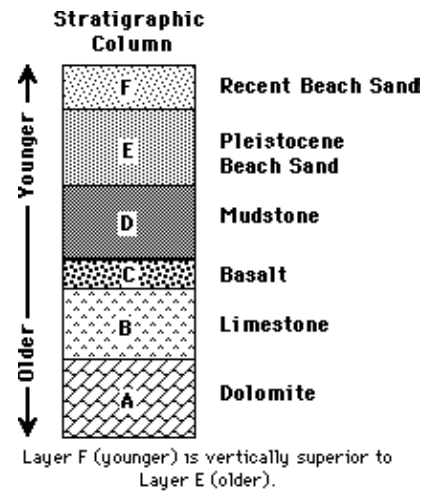


The Law of Superposition

In any undisturbed sequence of strata, the oldest layer is at the bottom of the sequence, and the youngest layer is at the top of the sequence.

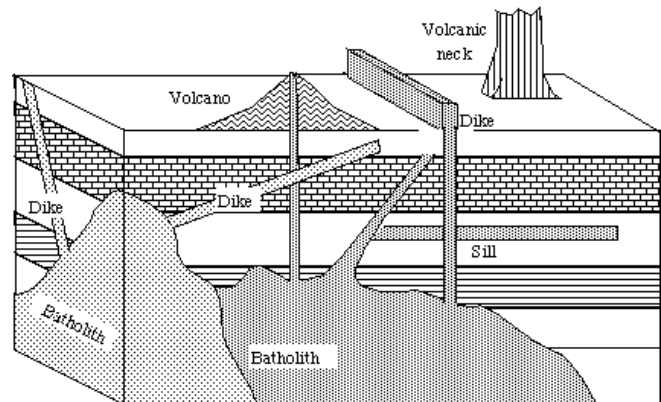


The Cross-Cutting Law

Any feature that *cuts across* a body of sediment or rock is younger than the body of sediment or rock that it cuts across.

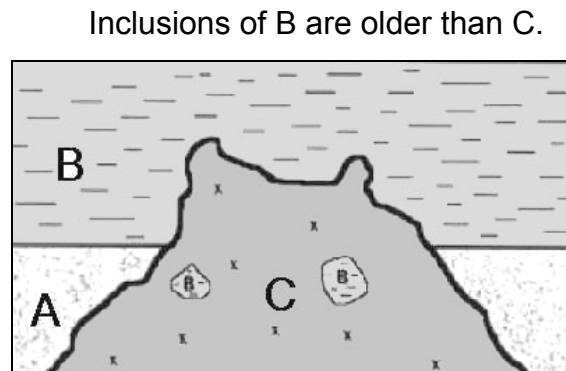
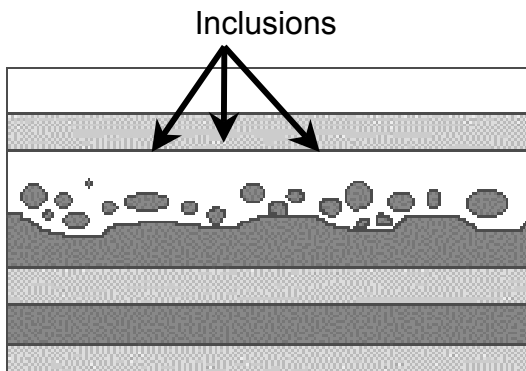
NOTE:

- A fracture is a crack in rock.
- A fault is a fracture along which movement has occurred.



The Law of Inclusions

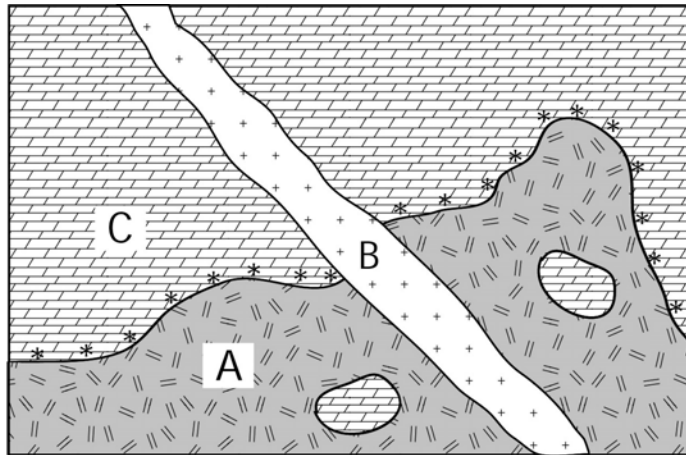
If one rock body contains fragments of another rock body it must be younger than the fragments of rock it contains. OR...The inclusions are older than the rocks which contain them.



Telling Relative Time

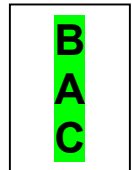
Use the laws of superposition, inclusions and cross-cutting relationships to determine the relative ages of the following cross-sections. Determine the OLDEST bed FIRST.

1



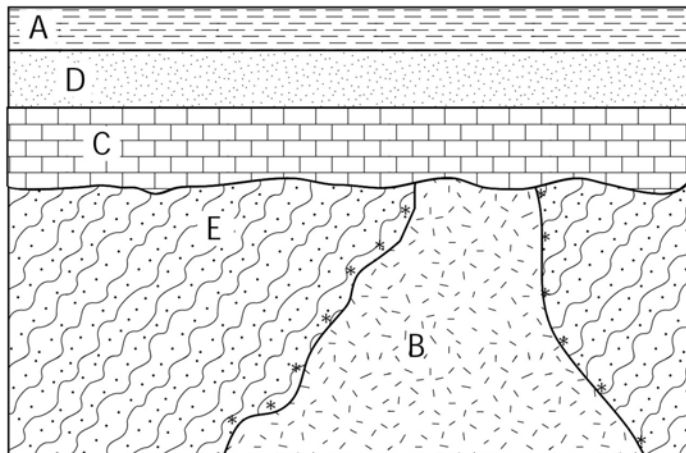
Youngest _____

Oldest _____



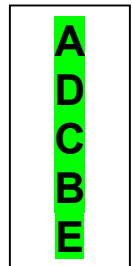
Stratigraphic Principle: _____

2



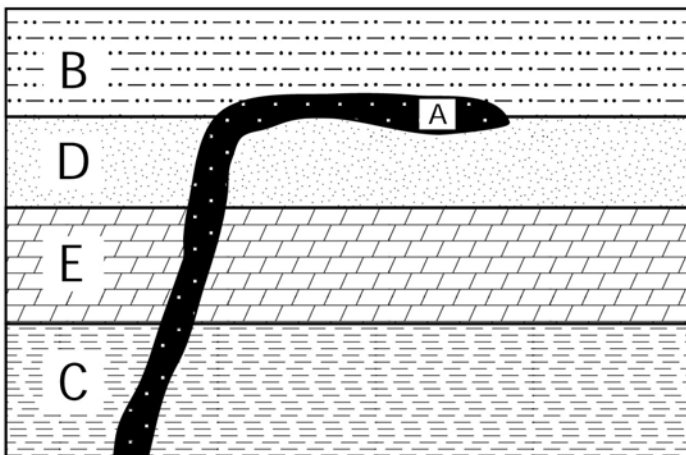
Youngest _____

Oldest _____



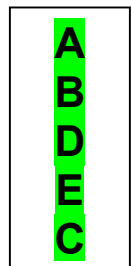
Stratigraphic Principle: _____

3



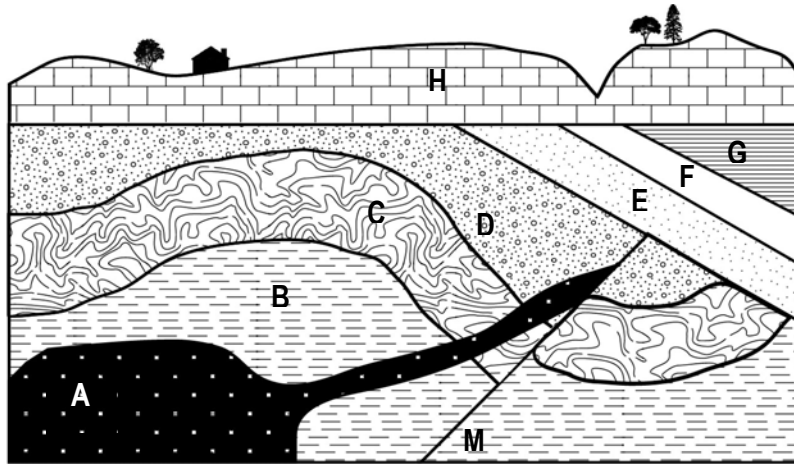
Youngest _____

Oldest _____

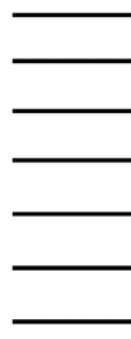


Stratigraphic Principle: _____

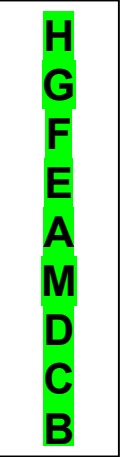
4



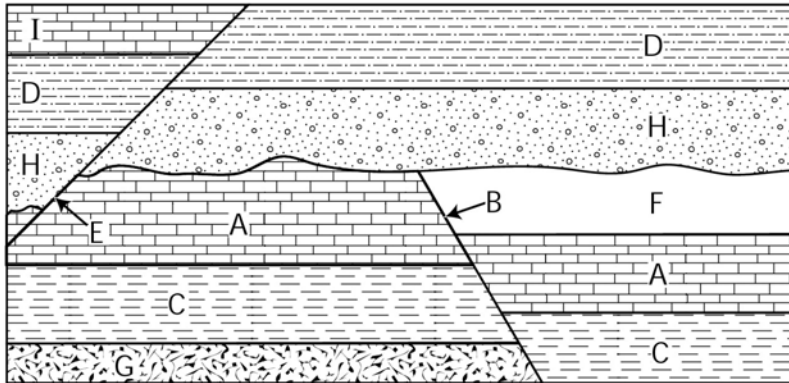
Youngest _____



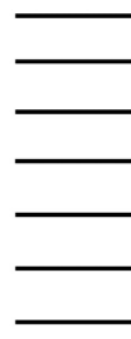
Oldest _____



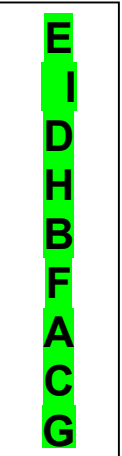
5



Youngest _____

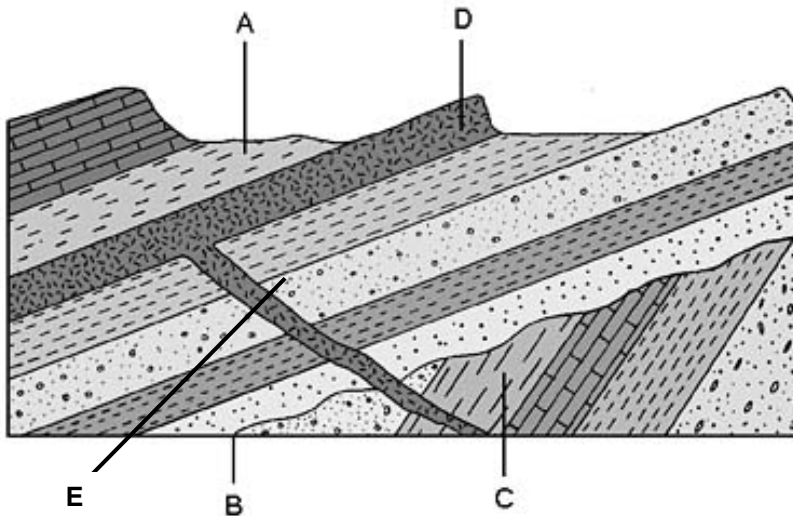


Oldest _____



Outline the sequence of events in the cross sections below by numbering each rock unit or event in the order in which it occurred or was deposited.

6

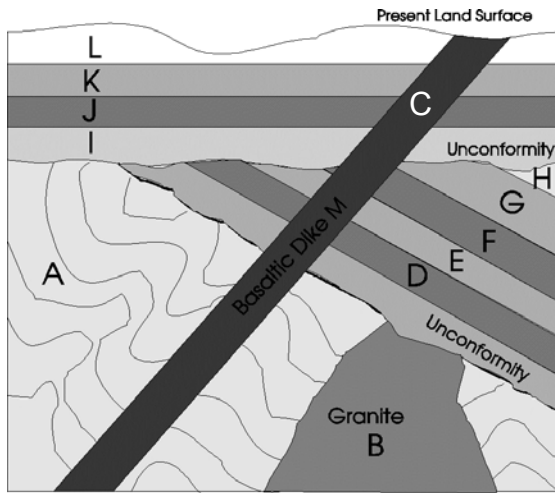


Youngest _____



Oldest _____

7



Refer to the cross-section on the left. For each of the following pairs of rock layers, identify the relative dating law that would be used to determine which bed was older and which was younger. Circle the letter of the OLDER bed.

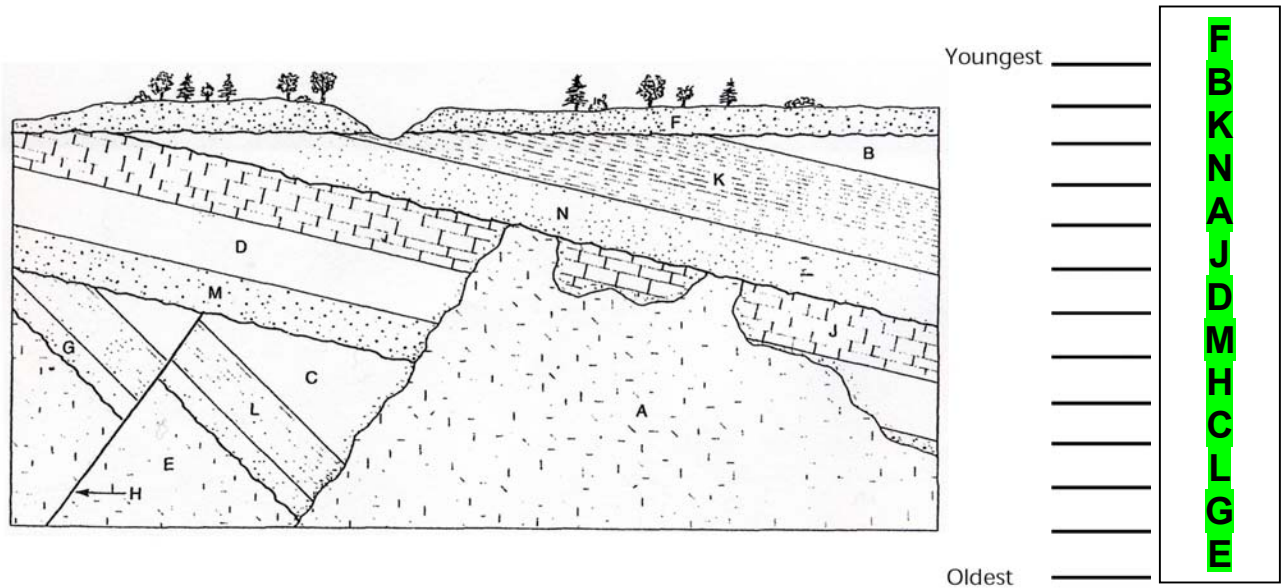
A & B **CROSS-CUTTING**

C & D **CROSS-CUTTING**

D & E **SUPERPOSITION**

J & K **SUPERPOSITION**

8



Refer to the cross-section above. for each of the following pairs of rock layers identify the relative dating law that you used to determine which bed was older and which was younger. Circle the letter of the YOUNGER bed.

M & A **CROSS-CUTTING**

J & N **SUPERPOSITION**

H & C **CROSS-CUTTING**

D & M **SUPERPOSITION**