We correlate rocks from one place to another to get a more complete record of Earth’s history over time.

These 3 columns represent rock layers from 3 separate areas. Some columns may be missing layers due to erosion. No single column represents a complete record. Your job is to line them up so a complete record of the region can be seen. The key to doing this is to find one or more layers present in all 3 columns that can be matched. In this example, why is the conglomerate probably a good place to start.
According to the ‘law of superposition’ the youngest rock layer will be on top and the oldest layer will be on the bottom.

Lined up by relative age!
Here's another example. There are four columns from neighboring regions. The numbers represent different fossils found in the rock layers. **Unconformities** (buried erosional surfaces) indicate that material is missing. Try to find a fossil number that is common to all four columns and use it to line them up for correlation in the previous example.
The fossil common to all columns is #7.

The rock with fossil #6 is the youngest because it’s on top.

The rock with fossil #8 is the oldest. It’s on the bottom. The layer with fossil #3 is missing from the rightmost column due to erosion.
Now try to reconstruct the geohistory of this region by listing the layers in order from the oldest to the youngest:

```
Oldest → 8
    5
    3
    10
    2
    7,9
    1
    4
Youngest → 6
    4
    1
    7,9
    2
    10
    3
    5
```

"missing" layers were eroded away and we are left with an unconformity. We need all locations to show us!

Each column by itself is incomplete but by using information from all of them we can develop a complete history of a geologic region.
Let’s try one more.....

Try to find a layer common to all 3 columns that you can use to help place these in the proper order.

Note: the wavy lines marked x~~x are unconformities.

Hint: There's only one layer they all share in common!
The sandstone layer is common to all the columns. Glacial deposits are on top. They are youngest....... and gray limestone is on the bottom. It is oldest.

Why do you think the layer of black shale is thicker in column C than in column A?