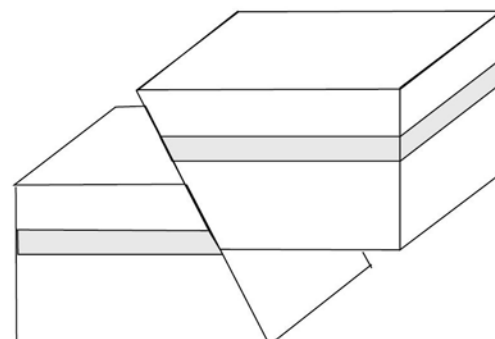
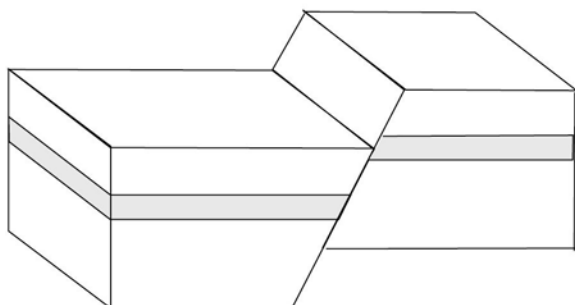
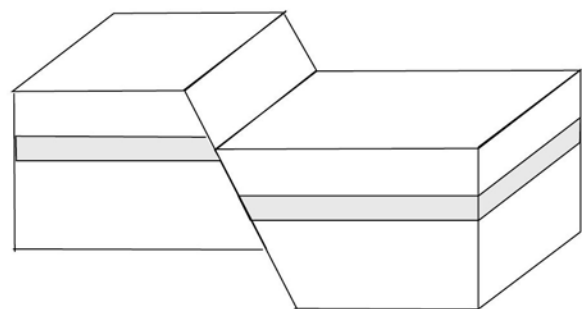
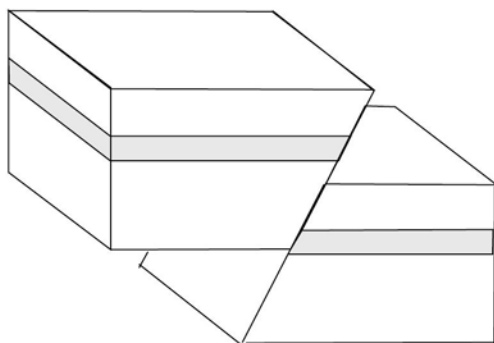
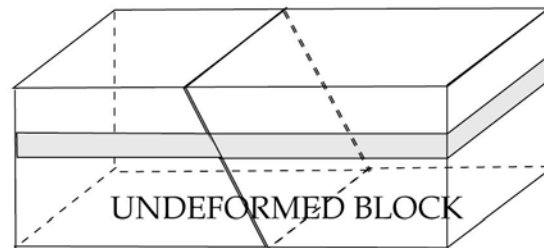
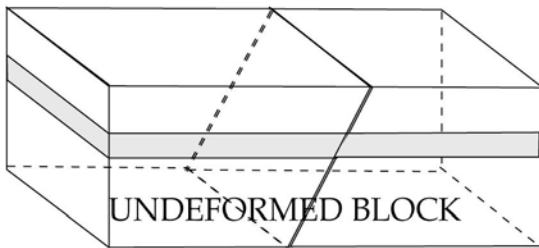
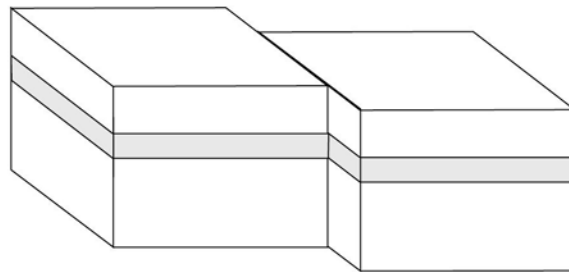
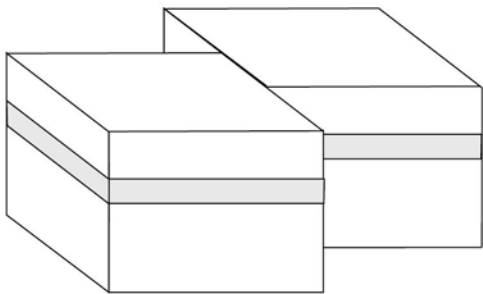
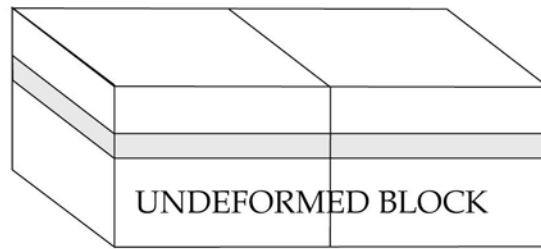
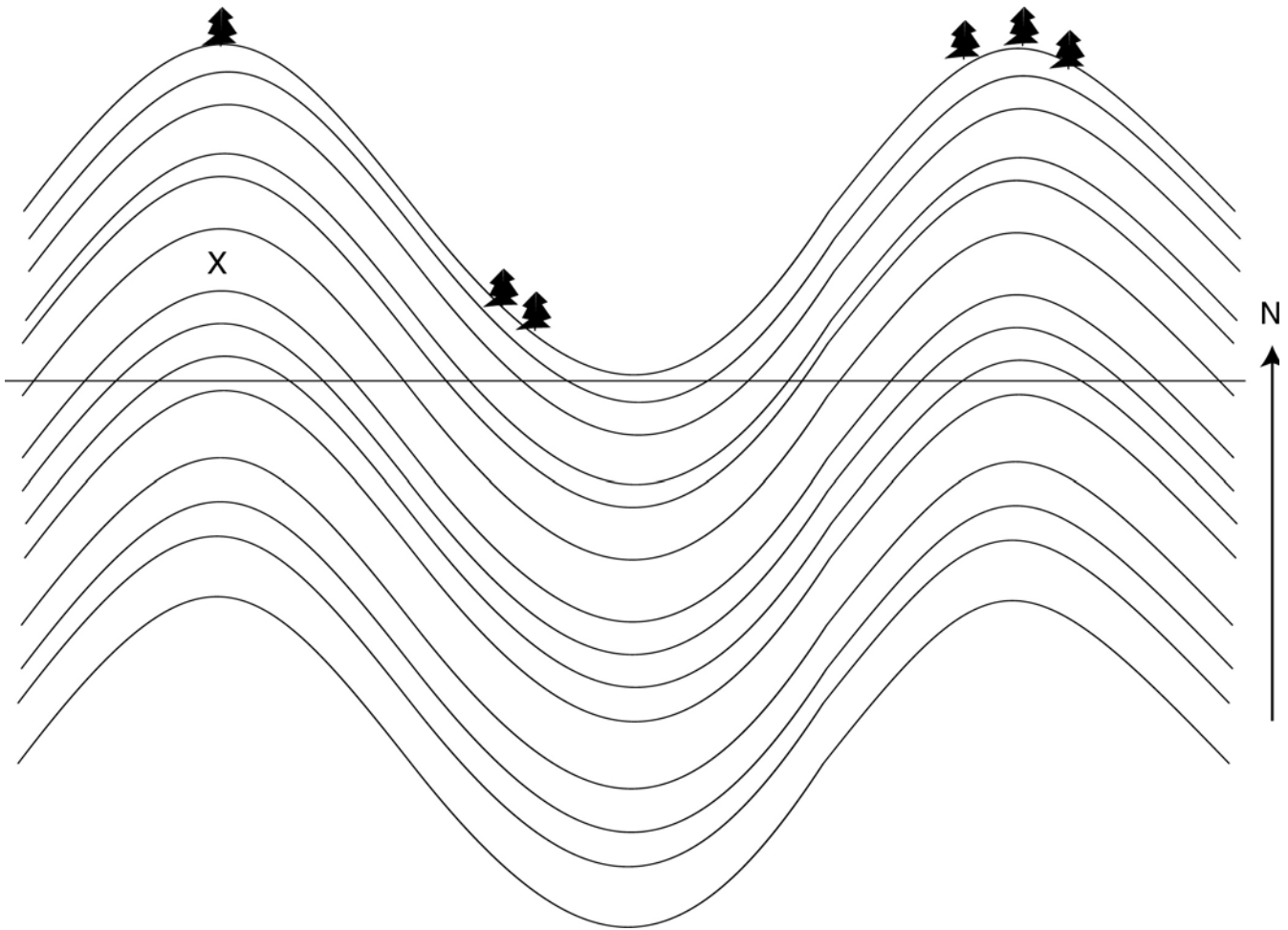


For each deformed block below:

1. Draw arrows parallel and on both sides of fault plane to indicate relative motion of the two sides.
2. If a dip-slip fault, label hanging wall and footwall; If a strike-slip fault, indicate if right or left lateral.
3. Indicate fault type (name). Indicate stress type and draw arrows on outside of block to indicate direction.





In the picture above, you are seeing the cross-section view of perfectly vertical and symmetrical anticlines and synclines.

1. Label which structures are anticlines and which are synclines.
2. Label each layer from youngest (1) to oldest (13).
3. Indicate with a drill well where you would drill if you were an oil company looking for trapped oil. Assume that layer X is a sandstone, rich in pore space (acts as a reservoir rock); the layer directly above X is impermeable (acts as a cap rock); and the layer directly below X is an organic-rich shale (material degrades under pressure to produce oil and gas). Remember, fluids and gases migrate towards the surface, unless prevented somehow!

The accompanying box diagram, when complete, will show you what the surface would look like if it eroded down to the indicated erosion line above. First, get scissors and cut out the box diagram. Be sure you can make it into a 3-D image, but don't staple or tape it yet. Complete the blank sides of the diagram: draw the way that the beds would look on all uncompleted sides. Be precise!

1. Color both diagrams, so you can see the matching beds.
2. Indicate with a star where you would buy property (on the surface) if layer X contained gold, and you were a miner.
3. Indicate with an X', where you would buy property if all surface exposures were already purchased.
4. If there was a visible fault line that ran from the northwest corner to the southeast corner straight through the middle of this area, and the fault dipped underground at a 45° angle (goes under to the NE), on which side of the fault would you build your house?

