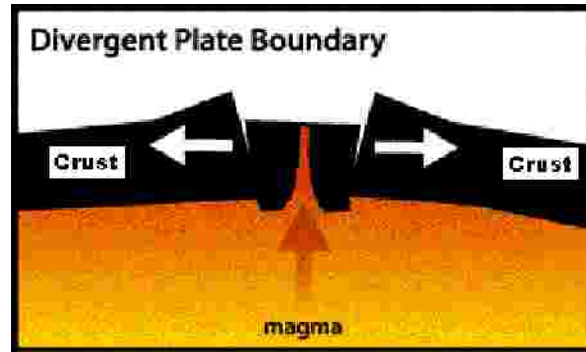


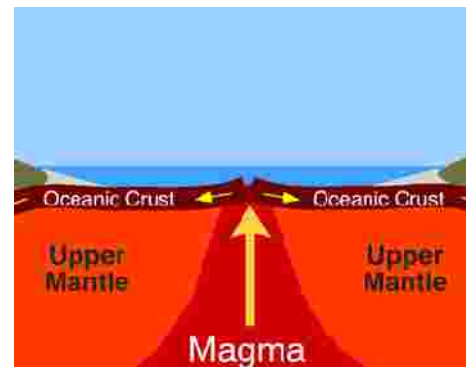
# Divergent Boundaries



## Divergent Boundaries

Places where plates are coming apart are called divergent boundaries. As shown in the drawing above, when the crust is pulled apart, it often breaks along parallel cracks that tilt slightly outward from each other. As the plates separate the block between cracks drops down into the soft, plastic mantle. The sinking of the block forms a valley called a rift. Magma (liquid rock) seeps upward to fill the cracks. **In this way, new crust is formed along the boundary.**

Earthquakes occur along the cracks, and volcanoes form where the magma reaches the surface.



Where a divergent boundary crosses the land, it forms valleys. The valleys are usually 30 to 50 kilometers wide. Examples include the East Africa rift valley in Kenya and Ethiopia, and the Rio Grande rift valley in New Mexico.

Where a divergent boundary crosses the ocean floor, the rift valley is much narrower, only a kilometer or less across. Magma rises up through separation in the crust and forms a ridge. Oceanic ridges rise a kilometer or so above the ocean floor, and can be thousands of miles long.

Examples include the Mid-Atlantic ridge and the East Pacific Rise. Plate separation is a slow process. For example, divergence along the Mid Atlantic ridge causes the Atlantic Ocean to widen at only about 2 centimeters per year.