

Quiz 8: Continental Orogeny (Ch. 10)

1. During flat slab subduction, what happens to the volcanic arc?
migrates farther away from the trench, often stops activity altogether for some period of time

2. What caused the uplift of the Colorado Plateau? (more than one answer is possible here)
1. asthenospheric upwelling after slab detachment or 2. asthenospheric upwelling due to subduction of spreading ridge

3. What style of deformation is defined by steep reverse faults offsetting deep levels of continental crust?
thick-skinned deformation

4. Explain why extension often follows orogeny.
Hot thickened crust is held at high elevation by horizontal compression - when compression ceases, it is insufficiently strong to support its own weight, tends to collapse. Collision results in underthrusting of cool rocks - as these heat up, to a stable geotherm, they weaken.