Understanding the Relationship between Marginal Cost and Average Variable Cost

Key Concepts:

- **Review:** Marginal cost (MC) is the cost of producing an extra unit of output.
- **Review:** Average variable cost (AVC) is the cost of labor per unit of output produced.
- When MC is below AVC, MC pulls the average down. When MC is above AVC, MC is pushing the average up; therefore MC and AVC intersect at the lowest AVC.

You should understand the exact relationship between marginal cost (MC) and average variable cost (AVC).

Because MC is the cost of producing the next unit, when it is below AVC, AVC must be falling. AVC falls because MC is the cost of the next unit produced; therefore, when the next unit costs less than the average, it must be pulling the average down. You can see this geometrically on the left.

By the same logic, when MC is above AVC, it is pushing the average up so AVC must be rising. When the marginal unit costs more than the average, the average has to increase.

By definition, then, the MC curve intersects the AVC curve at the minimum point on the AVC curve. At the intersection, MC and AVC are equal.

If you flip the AVC and MC curves over, they become APL and MP curves. Once again, productivity and costs are mirror images of each other.