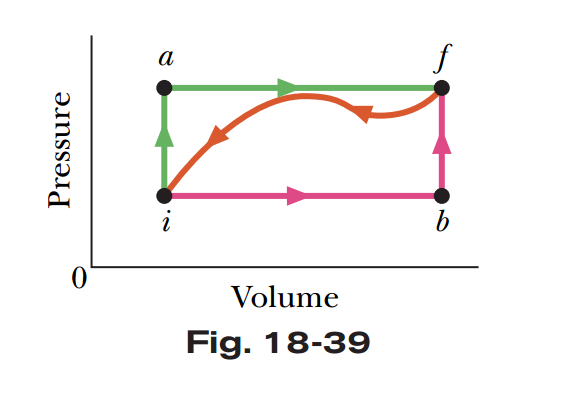
TEST 1

1. Two streams merge to form a river. One stream has a width of , depth of , and current speed of . The other stream is wide and deep, and flows at . If the river has width and speed , what is its depth?
2. About one-third of the body of a person floating in the Dead Sea will be above the waterline. Assuming that the human body density is , find the density of the water in the Dead Sea. (Why is it so much greater than ?).
3. A steel rod is in diameter at . A brass ring has an interior diameter of 2.992 cm at . At what common temperature will the ring just slide onto the rod? xx.
4. In the closed room, a young researcher does the experiment that fully submerged a copper spoon at, of mass, into a glass of water. Assume that room temperature is and no heat release to air. It is know that glass is of mass and containing water. What is the final temperature of the spoon? .

(Hint: temperature of water and glass equal to room temperature)

1. When a system is taken from state to state along path in Fig. 18-39, and . Along path , . (a) What is along path ? (b) If for the return path , what is for this path? (c) If , what is ? If , what is for (d) path and (e) path ?