

CHAPTER 9	Composition of Urine Answer Key	BLM 9.3.2A
ANSWER KEY		

1. The ions, amino acids, glucose, and urea enter the filtrate from the plasma by bulk flow caused by blood pressure. The substances are simply squeezed non-selectively through the glomerular membranes.
2. Protein is absent because its molecules are too large to be filtered into the capsule. Glucose is absent because it is reabsorbed from the nephron back into the blood.
3. This increase in concentration is largely due to the reabsorption of water as urine forms.
4. K^+ ions increase in concentration because they are added to the urine in the distal tubule by tubular secretion. Their concentration also increases because of the reabsorption of water.
5. The low pH of urine compared to plasma indicates that H^+ ions are being eliminated from the body. This occurs during tubular secretion (active transport) in the distal tubules. Acids are continually produced by metabolism of food and the activities of muscle cells, so H^+ elimination and maintenance of constant pH (7.4) is essential for survival.