The Excretory System (pages 579–583)

The Excretory System (page 580)

Key Concept: **The excretory system is the system in the body that collects wastes produced by cells and removes the wastes from the body. The structures of the excretory system that eliminate urea, water, and other wastes include the kidneys, ureters, urinary bladder, and urethra.**

- Wastes are produced when body cells use nutrients. For example, a waste called **urea** (yoo REE uh) is produced when cells break down proteins. **Excretion** is the process of removing wastes from the body.
- Wastes are removed from the body by the excretory system. The major organs of the excretory system are the two **kidneys**. Kidneys filter wastes out of the blood. The watery wastes are called **urine**.
- From the kidneys, urine travels through two tubes called **ureters** (yoo REE turz). The ureters carry urine to the **urinary bladder**. The bladder is a sack that stores the urine. Urine leaves the body through a tube called the **urethra** (yoo REE thruh).

Answer the following questions. Use your textbook and the ideas above.

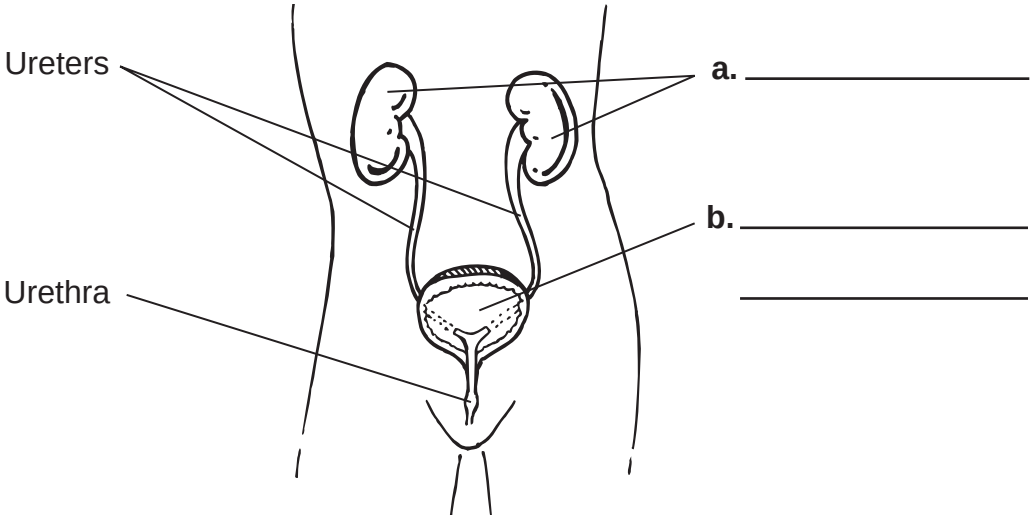
1. Read the words in the box. In each sentence below, fill in one of the words.

urea	urine	urethra

a. Wastes leave the kidneys as _____.

b. A waste produced when cells break down proteins is _____.

2. The diagram shows the excretory system. Fill in the blanks with the missing labels.



Filtration of Wastes (pages 580–582)

Key Concept: **The nephrons filter wastes in stages. First, both wastes and needed materials, such as glucose, are filtered out of the blood. Then, much of the needed material is returned to the blood, and the wastes are eliminated from the body.**

- Kidneys contain millions of tiny structures called **nephrons**. Each nephron acts like a filter. It removes things from the fluid that passes through it.
- As blood flows through a nephron, urea, glucose, and some water are removed from the blood. Glucose is a simple sugar that cells need for energy.
- The materials filtered out of the blood form urine. Before urine leaves the nephron, all of the glucose and most of the water pass back into the blood.

Answer the following questions. Use your textbook and the ideas above.

3. Tiny structures in the kidneys that filter blood are called

_____.

4. Is the following sentence true or false? Nephrons remove only urea from blood. _____

Excretion and Homeostasis (pages 582–583)

Key Concept: **Excretion maintains homeostasis by keeping the body's internal environment stable and free of harmful levels of chemicals. In addition to the kidneys, organs of excretion that maintain homeostasis include the lungs, skin, and liver.**

- Kidneys help keep your body in balance. Kidneys keep just the right amount of water in your blood. Kidneys also remove most of the body's wastes in urine.
- Other wastes leave the body in sweat. Carbon dioxide and water leave the body in air that is breathed out.
- An organ called the liver produces urea and some other wastes.

Answer the following questions. Use your textbook and the ideas above.

5. Circle the letter of each way the kidneys help keep the body in balance.

a. remove wastes

b. produce sweat

c. keep the right amount of water in the blood

6. Is the following sentence true or false? Urea is produced by the kidneys. _____