# Super-Journal Week 3:6

Every night, you should be reading at least 30 minutes of whatever book you have checked out from your assigned reading list. Tape or glue (but do not staple) this sheet into your Super-Journal on the left-side page. Fill in the table below every day by recording the required data.

| Day | Title | Start Pg. | End Pg. | Parent Sign. |
|---|---|---|---|---|
| Monday | | | | |
| Tuesday | | | | |
| Wednesday | | | | |
| Thursday | | | | |
| Friday | | | | |
| Saturday | | | | |
| Sunday | | | | |

On the right-side page of your Super-Journal, answer two of the questions below throughout the week. Be sure that the questions you choose to answer go with the appropriate type of book (Fiction or Nonfiction). The Super-Journal is due on the first day after the weekend (usually Monday). To earn credit for your journal entry, you must respond in at least five complete sentences per response and use specific evidence from the text to support your claim based on what you've read this week.

## FICTION

1. How does the author organize the text? Does the author use description, sequence, compare and contrast, cause and effect, or problem and solution to tell the story? Use evidence from the text to support your answer.

2. What is the main idea of the last chapter you read this week?

## NONFICTION

1. Explain what is happening in the text.

2. What is the main idea of this text?

# Tracking Digestion

In the average adult, the digestive canal is about 29 feet long! Think of a 29-foot-long garden hose that winds through your body, helping you break down food into nutrients—the basic materials your body needs.

Do you chew your food thoroughly? Your mouth and teeth are specially designed to chop and chew food. Then the food passes through a tube about ten inches long called the *esophagus*. A series of wave-like muscle contractions automatically moves the food along the digestive tract. This is called *peristalsis*.

Your stomach secretes juices that continue to break down the food particles. Contractions in the stomach push the food into the upper intestine, or *small intestine*. When you get to be an adult, your stomach will hold about 1/2 gallon (2 quarts) of food!



food moving down the esophagus
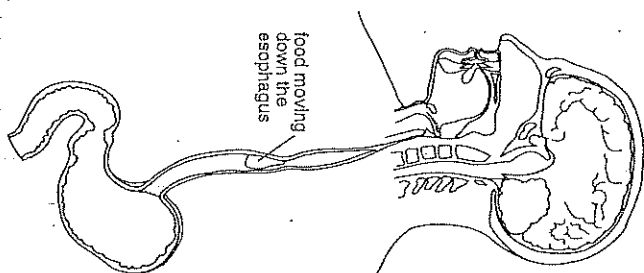
**Directions:** Write T for true or F for false before each statement.

___ 1. The mouth is not part of the digestive system.

___ 2. The teeth are part of the digestive system.

___ 3. Food passes from the mouth to the esophagus.

___ 4. The esophagus connects the mouth and the stomach.

___ 5. The esophagus is about two inches long.

___ 6. There are no muscles in the esophagus.

___ 7. Food moves automatically through our digestive system.

___ 8. Peristalsis is a disease of the digestive system.

___ 9. The stomach secretes juices that help break down food.

___ 10. Food goes from the stomach to the upper intestine.

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# Tracking Digestion

**Directions:** Use the number code to label and color the diagram of the digestive system.

1. The **salivary glands** secrete digestive enzymes to begin the digestive process in the mouth. Color them yellow.

2. The **esophagus** moves the food into the stomach. Color it brown.

3. The **liver** is an important warehouse for the body's nutrients. Color it green.

4. The **stomach** secretes juices that continue to break food particles down. Color it purple.

5. The **gall bladder** stores bile. Color it orange.

6. The **pancreas** secretes juices that help the digestion of food in the small intestine. It also secretes insulin, an important hormone that regulates glucose levels in the blood. Color it pink.

7. In the **small intestine**, body chemicals act with food and nutrients, which are absorbed into the blood. Color the small intestine red.

8. In the **large intestine**, leftover food that is of no use to the body is processed for elimination. Color it blue.
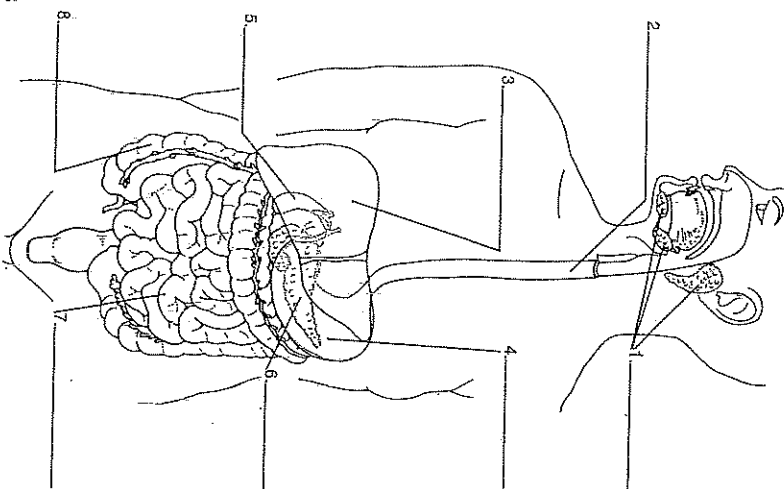


**Research:** Saliva in your mouth contains enzymes that break down starch and turn it into sugar. Put a piece of dry bread in your mouth and hold it there for a few minutes. Did the bread begin to taste sweet? Try this with two other starchy foods such as potatoes, crackers, corn, or rice. Write a few sentences to tell what happened.

**Bonus:** A meal stays in your stomach about three hours. It may take three days to pass through your body. Coarse foods that are high in fiber stimulate peristalsis. These high-fiber foods are called *roughage*. Make a list of ten foods that provide roughage for your digestive system.

# Explore Division of Unit Fractions by Non-Zero Whole Numbers
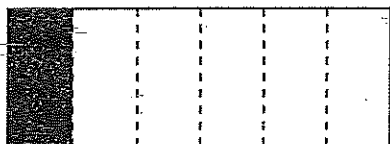
Name _____

## Review

You can use a fraction model to help you solve a division equation.

Consider $\frac{1}{6} \div 7 =$ _____.

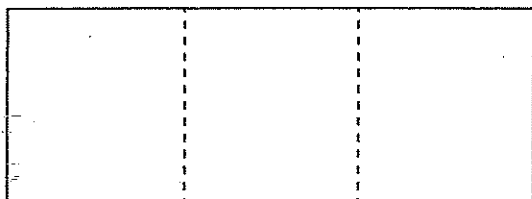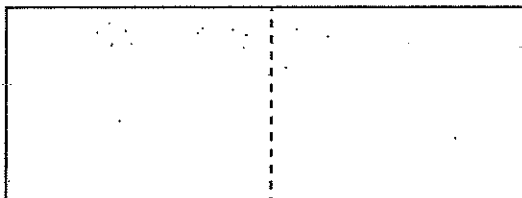| Step 1: Divide a whole into 6 parts. | Step 2: Divide $\frac{1}{6}$ into 7 parts. |
|---|---|
| Use vertical lines to divide a rectangle into 6 parts. | Use horizontal lines to divide the rectangle into 7 equal sections. |
| The shaded region represents $\frac{1}{6}$ of the whole. | Each part of the shaded region represent $\frac{1}{42}$ of the whole. |
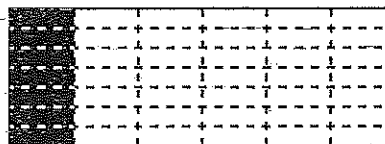
**What is the quotient? Use the fraction model to solve.**
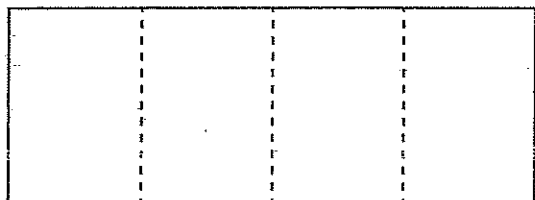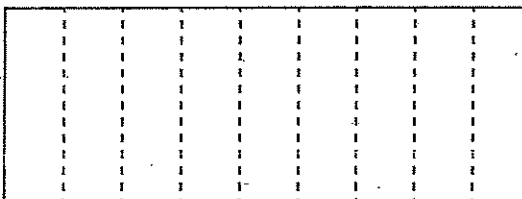
1. $\frac{1}{3} \div 6 =$ _____

3. $\frac{1}{2} \div 4 =$ _____

2. $\frac{1}{4} \div 5 =$ _____

4. $\frac{1}{9} \div 3 =$ _____
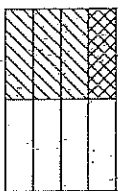
# Additional practice

Name _____

## Review

You can use a representation to find the quotient of a unit fraction divided by a whole number.

Belinda uses $\frac{1}{2}$ of her flower garden for roses. She plants 4 rosebushes, giving each an equal amount of the garden. What fraction of Belinda's flower garden will be used for each rosebush?

To solve, find $\frac{1}{2} \div 4$.

Use a representation to find the quotient.
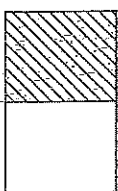
| Draw $\frac{1}{2}$ of one whole to show the part of the garden for the roses. | Divide the $\frac{1}{2}$ into 4 equal parts for each rosebush. |
|---|---|

Each rosebush will use $\frac{1}{8}$ of the flower garden.

**What is the quotient? Use a representation to solve.**

1. $\frac{1}{6} \div 4 =$ _____

2. $\frac{1}{4} \div 2 =$ _____

3. $\frac{1}{9} \div 5 =$ _____

4. $\frac{1}{5} \div 3 =$ _____

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**What is the quotient?**

5. $\frac{1}{3} \div 8 =$ _____

6. $\frac{1}{7} \div 6 =$ _____

7. $\frac{1}{10} \div 2 =$ _____

8. $\frac{1}{9} \div 4 =$ _____

9. In 3 minutes, Javier can walk $\frac{1}{6}$ mile. How far does Javier walk in 1 minute?

_____ mile

10. A baker has $\frac{1}{2}$ pound of flour. From this amount, the baker can make 5 cakes. How much flour does the baker use to make each cake?

_____ pound

11. A swimmer swims 5 lengths of the pool to swim $\frac{1}{4}$ kilometer. What fraction of a kilometer is each length of the pool?

_____ kilometer

**Math @ Home Activity**

Set out measuring cups and measuring spoons that represent unit fractions, such as $\frac{1}{3}$ cup or $\frac{1}{4}$ teaspoon. Have your child practice dividing each unit fraction into 2, 3, or 4 smaller, equal amounts. Use other measuring cups or spoons to verify the results, if possible.

# Sugar Regulator

**Some people with diabetes need insulin shots every day.**



Your pancreas is a gland with two separate jobs in digestion. First, the pancreas is like a giant *salivary gland*. Each day it pours one to two pints of digestive juices into the digestive system. The pancreas also manufactures enzymes that digest fats, carbohydrates, and proteins.

Your pancreas also produces *insulin*, a hormone used throughout the body to control your sugar level. Some people don't produce enough insulin, and their blood sugar rises to a very high level after a meal. This can cause serious health problems such as diabetes. Your pancreas also secretes *glucagon*, a hormone that moves sugar from the liver into the blood when levels are low. Because the level of sugar in your blood is important to your health, your pancreas is a vital gland.
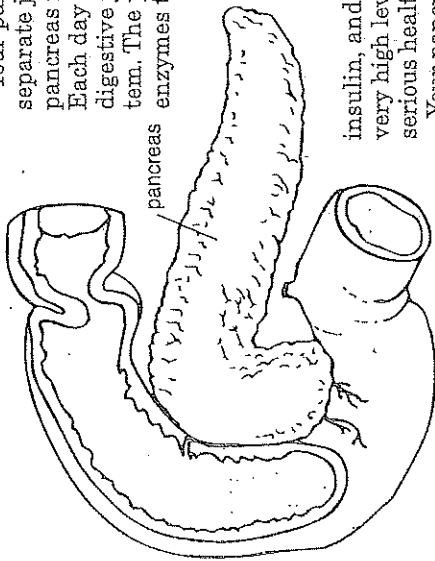
**Directions:** Use a word or phrase from the text to complete each sentence.

1. The pancreas has _____ jobs in the digestive system.

2. The pancreas manufactures _____ that digest nutrients.

3. Three nutrients that the pancreatic enzymes help digest are _____

---

# Sugar Regulator

**Directions:** Use the text or a dictionary to find the definition of each word. Draw a line to connect each word to its definition.

1. pancreas

2. organs

3. enzyme

4. insulin

5. diabetes

6. hormone

7. disease

a. a sickness in which the body produces little or no insulin

b. a substance produced in plant and animal cells that causes a chemical change

c. a large gland behind the stomach that sends a juice into the small intestine to help digestion

d. a condition of not being healthy

e. The liver and kidneys are examples of these.

f. a hormone of the pancreas that helps the body use sugar and starches

g. a substance formed in an organ and carried in the blood to other parts of the body
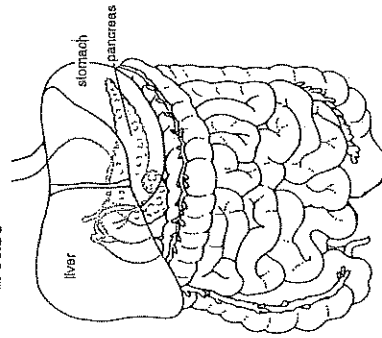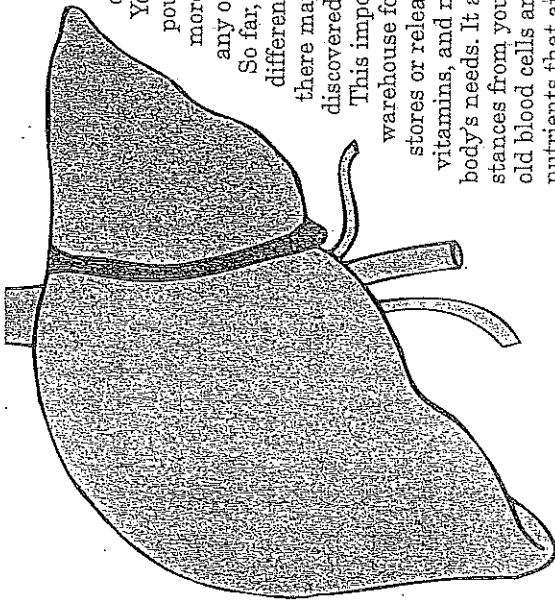


**Research:** What are *glucose* and *glycogen?* In a few sentences, describe the difference between glucose and glycogen.

**Bonus:** Do you know a person who has diabetes? Interview the person and ask him these questions. Be sure to record his answers. What is the most difficult thing about having diabetes? What is your biggest worry about the disease? How do you treat the disease?

# The Body's Chemical Factory

**Directions:** Use words from the text to fill in the blanks.

1. Name five nutrients that the liver stores.

   _____

   _____

   _____

2. Weighing about 4 1/2 pounds, the liver is the _____ internal organ.

3. Which word in the text means "a series of changes by which something develops"? _____

4. The liver detoxifies the _____

5. The liver filters out old blood _____

6. The liver processes most of the nutrients that are absorbed from the _____

7. The liver is the digestive system's most _____ organ.

8. Without enzymes, your body couldn't _____ food.

**Research:** One of the liver's jobs is to deal with poisonous chemicals in the blood such as drugs and alcohol. Find out what happens to the liver after constant alcohol or drug abuse. Draw a cartoon or make a poster that tells why alcohol is bad for your liver.

**Bonus:** The liver acts as a filter for the body. To simulate what the liver does for our bodies, use a strainer or a few coffee filters to do this experiment. Pour different substances through the strainer or filters. Try freshly squeezed fruit juice. What happens? What slips through the filter, and what stays in? Write a few sentences about what straining or filtering does to a substance.

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# The Body's Chemical Factory

During your lifetime, you may consume from 60,000 to 100,000 pounds of food! Without enzymes, the body couldn't digest any of that food.
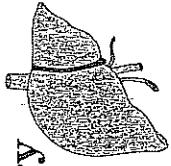
Do you know what your body's largest internal organ is? It's your *liver.*

Your liver weighs about 4 1/2 pounds. Your liver also has more separate functions than any of your body's other organs. So far, scientists know of 500 different functions of the liver, and there may be many others yet to be discovered.

This important organ acts like a warehouse for your body's nutrients. It stores or releases sugars, starches, fats, vitamins, and minerals according to your body's needs. It also removes harmful substances from your blood. Your liver filters old blood cells and processes most of the nutrients that are absorbed from the small intestine. Your liver is the most complex organ in the digestive system.

**Directions:** Circle the letter that is the correct answer for each question.

1. The body's largest internal organ is

   (a) the stomach   (b) the liver   (c) the gall bladder

2. About how much does the liver weigh?

   (a) 4 1/2 ounces   (b) 14 ounces   (c) 4 1/2 pounds

3. The liver acts like a

   (a) warehouse   (b) pump   (c) both a and b

# Divide Unit Fractions by Non-Zero Whole Numbers

Name _____

## Review

You can rewrite division of a unit fraction by a non-zero whole number as multiplication by a unit fraction.

Consider $\frac{1}{3} \div 2$.
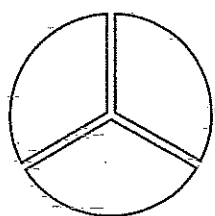


In the figure, each wedge is $\frac{1}{3}$.

$\frac{1}{3} \div 2$ means divide $\frac{1}{3}$ into 2 equal parts.

To calculate half of $\frac{1}{3}$, multiply $\frac{1}{3}$ by $\frac{1}{2}$.

$$\frac{1}{3} \times \frac{1}{2} = \frac{1}{3 \times 2}$$
$$= \frac{1}{6}$$

So, $\frac{1}{3} \div 2 = \frac{1}{6}$

**What is the quotient? Rewrite the division equation as a multiplication equation and then solve.**

1. $\frac{1}{8} \div 7 =$ _____

2. $\frac{1}{9} \div 11 =$ _____

3. $\frac{1}{5} \div 2 =$ _____

4. $\frac{1}{3} \div 12 =$ _____

5. $\frac{1}{6} \div 10 =$ _____

6. $\frac{1}{11} \div 4 =$ _____

7. $\frac{1}{6} \div 8 =$ _____

8. $\frac{1}{12} \div 12 =$ _____

# Additional Practice

Name _____

## Review

**You can use multiplication to find the quotient of a unit fraction divided by a whole number.**

Mr. Torres has $\frac{1}{3}$ of a large container of glue to divide equally among 2 smaller containers. How much of the glue in the large container will be put into each small container?

To solve, find $\frac{1}{3} \div 2$.

Use multiplication to find the quotient.

Dividing by 2 is the same as multiplying by $\frac{1}{2}$.

$\frac{1}{3} \div 2 = \frac{1}{3} \times \frac{1}{2} = \frac{1}{6}$

Each small container can hold $\frac{1}{6}$ of the glue from the larger container.

## What is the quotient?

1. $\frac{1}{5} \div 7 =$ _____

2. $\frac{1}{8} \div 3 =$ _____

3. $\frac{1}{6} \div 9 =$ _____

4. $\frac{1}{3} \div 5 =$ _____

5. $\frac{1}{4} \div 6 =$ _____

6. $\frac{1}{9} \div 2 =$ _____

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7. Greta draws a line that is $\frac{1}{2}$ foot long. She divides the line into 4 equal sections. What is the length of each section?

_____ foot

8. Joseph lives $\frac{1}{5}$ mile from school. He can walk to school in 5 minutes. How far does Joseph walk each minute?

_____ mile

9. Karlie still has $\frac{1}{3}$ of her book left to read. She plans to finish the book by reading the same amount each day for the next 5 days. How much of the book does Karlie plan to read each day?

_____ of the book

10. A pitcher of lemonade is $\frac{1}{4}$ full. Remy pours the lemonade equally into 3 cups. What fraction of a full pitcher of lemonade gets poured into each cup?

_____

**Math @ Home Activity**

With your child, look for situations around your home where fractional amounts are present. For example, if $\frac{1}{2}$ of a meal is left over, ask your child to determine how much of the original meal each person in your family will receive if the leftovers are shared equally. Use a unit fraction for the amount of leftovers. Look for and solve other examples.

# Shaped Like A Bean

About 2 1/2 pints of blood are pumped through the kidneys every minute. That is more than a quart!

adrenal gland

ureters (connects to bladder)
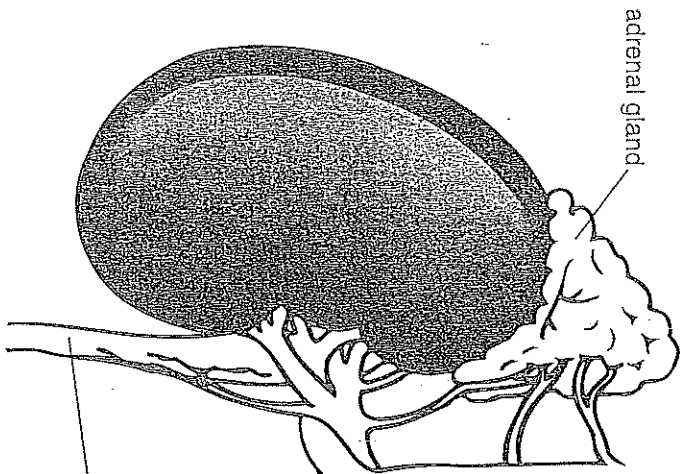
Do you know why kidney beans have that name? It's because they are shaped like your body's *kidneys*. You have two kidneys. They are located on each side of your spine, above your waist, behind your abdominal cavity. Two tubes connect the kidneys with the *bladder*.

The kidneys filter waste from the blood. This waste combines with water to form a fluid called *urine*. The tiny units in the kidneys that filter the blood are called *nephrons*. Each kidney has more than one million (1,000,000) nephrons.

**Directions:** Unscramble the words to complete the sentences.

1. Most people have two (s y d k i n e) _____.
2. Tubes (c c n t o e n) _____ the kidneys with the bladder.
3. The kidneys (i l f r e t) _____ waste from the blood.
4. (n i u r e) _____ is made in the kidneys.
5. Nephrons are the (t s i n u) _____ that filter waste from the blood in the kidneys.

# Shaped Like A Bean

**Directions:** Use the clues and the text to fill in the crossword puzzle.

**Across:**
1. Kidneys are above your waist and behind your _____ cavity.
3. Your kidneys filter _____ from your blood.
5. The tiny units in the kidneys that filter the blood are called _____.
7. Kidney beans are shaped like your body's _____.

**Down:**
2. Two tubes connect the kidneys with the _____.
4. In the kidneys, waste combines with water to form a fluid called _____.
6. Your kidneys are located on both sides of your _____.
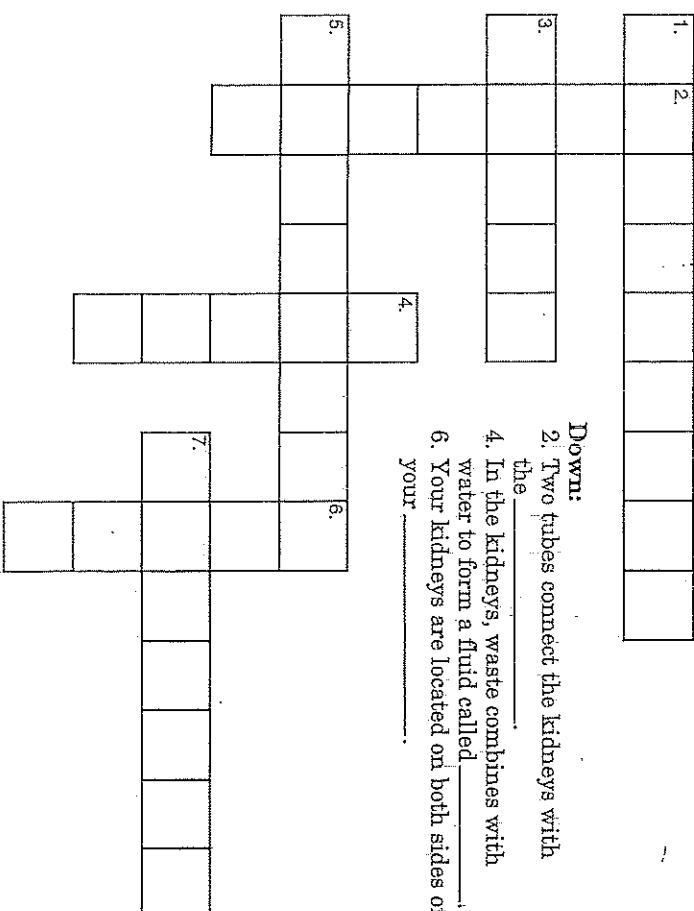
**Research:** What is *dialysis*? Describe it in a few sentences.

**Bonus:** Have you ever eaten kidney pie? Make a list of internal organs of animals that some people eat.

# The Excretory System
## Cross-Curricular Focus: Life Science

Your body is approximately 60% water. Water is part of all the cells in your body and the plasma in your blood. Water helps your cells receive the nutrients they need, and it helps take away the wastes.

All living things produce wastes. It is the job of the excretory system to regulate the amount of water that you have in your body and to help remove wastes from your system. If wastes build up in your blood and in your cells, your body becomes toxic, which can be deadly.

Several different organs are involved in your excretory system. Even your skin participates in the process! You have sweat glands that can release water onto the surface of your skin to keep you from getting overheated. You might find it inconvenient to sweat in certain situations, but people who physically cannot sweat are in constant danger of dying from heat stroke, so be glad if you can sweat!

Your liver is an important part of the process as well. Whenever your body recycles parts of cells that are damaged or old, they become part of the wastes that need to be removed. This recycling puts a lot of nitrogen into your blood. Your liver filters the nitrogen out of your blood, changing it into urea. Without your liver, you could die of nitrogen poisoning.

Just inside your lower back are two large bean-shaped organs called your **kidneys**. Their main job is to filter out the urea in your blood. The kidneys have a sophisticated system of pumps and tubes. Most of the liquid is returned to the blood, where it continues on its way through the circulatory system. Your kidneys have sensors that tell it how much water to release. If you've been drinking a lot of water, your blood will have more water in it. Your kidneys can tell. They send only the right amount of water back into the blood. The small portion of liquid that remains behind becomes **urine**. It drains through tiny tubes called ureters into a muscular bag called the **bladder**. Your body knows when your bladder is full and needs to be emptied. Your brain receives a signal to let you know that it's time to visit the bathroom.

Name: _____

Answer the following questions based on the reading passage. Don't forget to go back to the passage whenever necessary to find or confirm your answers.

1) In your own words, explain why the excretory system is important to your body.

_____

_____

2) Why is it dangerous to be unable to sweat?

_____

_____

3) What substance does the liver change into urea?

_____

_____

4) Which organs turns liquid into urine?

_____

_____

5) What happens if waste builds up in our body?

_____

_____

# Additional Practice

Name

## Review

You can use strategies you know to help you solve problems involving division.

A sandwich shop uses $\frac{1}{4}$ pound of lunch meat in each sandwich. Yesterday, the sandwich shop used 20 pounds of lunch meat. How many sandwiches were served yesterday?

To solve, find $20 \div \frac{1}{4}$.

There are four $\frac{1}{4}$'s in each whole.

So, $20 \times 4 = 80$.

The sandwich shop served 80 sandwiches yesterday.

1. Deanne covers $\frac{1}{3}$ of her notebook cover with 5 stickers. Each sticker is the same size. What part of the entire notebook cover does each sticker cover?

_____

2. Malvin uses a mix and some water to make 54 fluid ounces of fruit punch. He pours an equal amount into 8 glasses for himself and seven friends. How much fruit punch does each person get?

_____ fluid ounces

3. A baker has 10 pounds of flour on hand. Each batch of cookies needs $\frac{1}{2}$ pound of flour. How many batches of cookies can the baker make using the available flour?

_____ batches

4. Maxine has 2 pounds of raisins. She places an equal amount into each of 15 snack bags. How many pounds of raisins are in each snack bag?

_____ pound

5. Andrea has 50 perennials to plant. She plants the flowers in 6 equal rows, using as many flowers as possible. How many perennials are in each row? How many are left unplanted?

_____ perennials in each row;

_____ perennials left unplanted

6. Matthew has $\frac{1}{3}$ pound of trail mix. He eats all of it in 4 equal servings during his hike. How much trail mix does Matthew eat in one serving?

_____ pound

### Math @ Home Activity

With your child, look for situations around your home where your child can practice solving problems involving division. For example, if there are 3 apples and 5 people each want some, how much does each person get if they share equally? Look for and solve other examples that have been studied in this unit.

# Solve Problems Involving Fractions

Name _____

| Review |
|---|
| Be careful when solving problems involving division of unit fractions. |

| Dividing a Whole Number by a Whole Number | 6 foot of rope cut into 10 equal pieces. How long is each piece? | $6 \div 10 = \frac{6}{10}$ or $\frac{3}{5}$ |
|---|---|---|
| Dividing a Whole Number by a Unit Fraction | One dime is $\frac{1}{10}$ of a dollar. How many dimes in $6.00? | $6 \div \frac{1}{10} = 6 \times 10$ $= 60$ |
| Dividing a Unit Fraction by a Whole Number | A $\frac{1}{6}$ acre garden plot is divided into 10 equal size flower beds. How big is each flower bed? | $\frac{1}{6} \div 10 = \frac{1}{6} \times \frac{1}{10}$ $= \frac{1}{60}$ |

**Solve each problem. Show your work.**

1. A chicken noodle soup recipe calls for $\frac{1}{4}$ cup of chopped parsley and makes 6 servings. How much chopped parsley is in each serving?

2. Walter is dividing 6 pounds of flour equally among 8 containers. How many pounds of flour will be in each container?

3. Mary has 4 pounds of pulled pork and 9 pounds of brisket to divide equally among five customers. How many total pounds of each type of meat will each customer get?

4. Soo has 5 cups of orange juice. She has a smoothie recipe which calls for $\frac{1}{3}$ cup of orange juice per smoothie. How many smoothies can Soo make?

# The Beautiful Brain

Neurons of a fetus or baby before birth form at the rate of about 250,000 per minute.

neuron
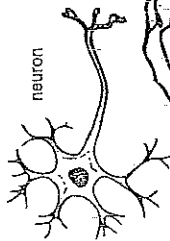
Are you thinking? Your brain is at work. Are you daydreaming? Your brain is still working. Will you be sleeping soon? Your brain will be at work then too. Your brain never rests. Your brain is the most complex part of your nervous system.

Although your brain makes up only about 2% of your body's weight, it consumes 20% of the energy your body produces. You get this energy from glucose and oxygen carried to the brain in the bloodstream. The brain controls all of your thoughts and movements. The average human brain weighs about three pounds. It is filled with a jellylike substance. The brain consists of 100 billion nerve cells called *neurons*. Neurons carry the brain's messages, or nerve signals, to other parts of the body.
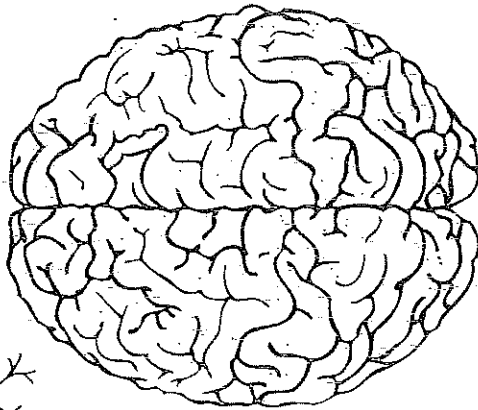
**Directions:** Write T for true or F for false before each sentence.

_____ 1. When you think, your brain is at rest.

_____ 2. When you daydream, your brain is working.

_____ 3. When you sleep, your brain stops working.

_____ 4. Your brain controls every thought that you have.

_____ 5. Your brain controls all of your movements.

_____ 6. The average human brain weighs about three ounces.

_____ 7. Your brain contains a substance like jelly.

_____ 8. Your brain consists of billions of nerve cells.

_____ 9. Neurons carry food and nutrients to other parts of the body.

_____ 10. Neurons carry messages and signals from the brain.

*Fascinating Facts About The Human Body—Grades 4–6 • ©1995 The Education Center, Inc. • TEC370*

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# Brainy Bonanza

You have about 100 billion neurons in your brain. That's about as many stars as there are in our galaxy.

Your brain can think, plan, and study things. Your brain can even think and learn about itself. What does your brain need? Blood is very important to your brain. If blood circulation to the brain is stopped, brain tissue may die. If blood circulation to the brain is disturbed in any way, hearing, sight, feeling, or movement may be affected.

The brain is a complex body part. It is a hungry one, too. Even though your brain is relatively small, it requires 20% of your heart's freshly oxygenated blood supply. And your brain uses 20% of the blood's important nutrients—oxygen and glucose.
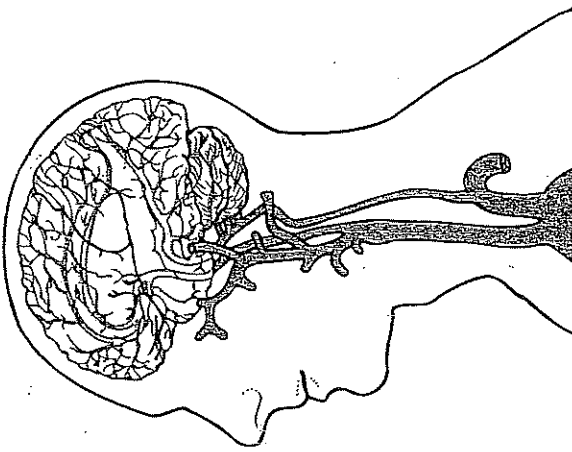
**Directions:** Circle the letter of the best answer for each question.

1. What percentage of fresh blood does the brain use?

   (a) 10%     (b) 20%     (c) 50%

2. How much of the blood's oxygen supply does your brain use?

   (a) 10%     (b) 20%     (c) 50%

3. As a body part, your brain is

   (a) complex     (b) relatively small     (c) both a and b

4. Which one is an important nutrient for the brain?

   (a) oxygen     (b) glucose     (c) both a and b

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Name: _____

## Solve each problem.

**1** Roger has 4 liters of orange juice. He puts the same amount of juice into each of 5 pitchers. How many liters of orange juice are in 1 pitcher?

**2** Marta has 8 cubic feet of potting soil and 3 flower pots. Suppose she puts the same amount of soil in each pot. How many cubic feet of soil will she put in each flower pot?

**3** Greg made 27 ounces of potato salad to serve to 10 guests at a picnic. If each serving is the same size, how much potato salad will each guest receive?

**4** Chandra spends 15 minutes doing 4 math problems. She spends the same amount of time on each problem. How many minutes does she spend on each problem?

**5** Taylor has 5 yards of gold ribbon to decorate 8 costumes for the school play. She plans to use the same amount of ribbon for each costume. How many yards of ribbon will she use for each costume?

**6** DeShawn is using 7 meters of wire fencing to make a play area for his puppy. He wants to cut the fencing into 6 pieces of equal length. How long will each piece of fencing be?

**7** What is a division word problem that can be represented by $\frac{4}{3}$?