Study the definitions of the words. Then do the exercises that follow.

**affect**  
\begin{align*}
\text{v.} & \quad 1. \text{To bring about a change in.} \\
\text{Do you think changing schools will affect my grades?} \\
2. \text{To pretend to be or to have.} \\
\text{The reporter affected an interest in buying a used car in order to get the salesperson to talk to her.}
\end{align*}

**calculate**  
\begin{align*}
\text{v.} & \quad 1. \text{To find the answer by using arithmetic.} \\
\text{I gave my sister the check so she could calculate her share of the bill.} \\
2. \text{To figure out by reasoning.} \\
\text{You'd better calculate the risks carefully before going on a long trip with that old car.}
\end{align*}

**climate**  
\begin{align*}
\text{n.} & \quad \text{The average weather conditions of an area.} \\
\text{Florida's warm climate is perfect for growing oranges.}
\end{align*}

**column**  
\begin{align*}
\text{n.} & \quad 1. \text{A row of figures or words running down a printed page; anything arranged like that.} \\
\text{Do all the problems in the first column on page 30.} \\
2. \text{A tall, usually stone support that holds up something.} \\
\text{Forty-six marble columns support the roof of the Parthenon in Athens.} \\
3. \text{A regular newspaper or magazine article usually written by the same person.} \\
\text{My mother writes a weekly sports column for the News-Tribune.}
\end{align*}

**decay**  
\begin{align*}
\text{v.} & \quad \text{To rot.} \\
\text{Leaves left on the ground will decay over the winter.} \\
\text{n.} & \quad \text{A breaking down or rotting.} \\
\text{Dentists say tooth decay can be prevented by regular brushing and flossing.}
\end{align*}
**exceed**

*ek sed'*

v. 1. To be more than.
The final score of Monday's game exceeded our best hopes.

2. To go beyond what is allowed.
The officer who stopped me told me never to exceed the speed limit again.

**excess** (ek ses') n. More than enough; an extra amount.
Use what you need, and save the excess.

**excessive** adj. Too much or too great.
Last winter my parents paid an excessive amount for heating oil.

---

**forbid**

*far bid'*

v. To order not to do something.
A state law forbids smoking in hospitals.

**forbidden** adj. Not allowed.
Eating in class is forbidden.

---

**grove**

*gröv*

n. A group of trees growing together with open space between them.
The children walked hand in hand through the grove of lemon trees.

---

**limb**

*lim*

n. 1. An arm, leg, or wing.
Bats use their webbed front and back limbs to fly.

2. A large tree branch.
The owl was perched on the top limb of the tree.

---

**mammoth**

*ma’ math*

adj. Very large; huge.
The mammoth Seattle Skydome holds over fifty thousand people.

---

**mature**

*me choor'*

v. To become fully grown or developed.
Rabbits mature in about six months and are then able to bear young.

adj. Fully grown or developed; adult.
My brother looks very mature for only eleven.

---

**permit**

*par mit'*

v. To allow.
Some towns permit overnight parking downtown.

n. (pur’ mit) A written notice that allows a person to do something.
You need a permit to go fishing in that lake.

---

**resist**

*ri zist'*

v. 1. To refuse to give in to; to withstand.
Some kinds of corn resist disease better than others.

2. To work or fight against.
The armies of Genghis Khan were so powerful, it was useless to resist them.
| **scorch** | v. To burn slightly.  
If you press a shirt with an iron that is too hot, you might **scorch** the cloth. |
| **scorching** | adj. Very hot.  
On such a **scorching** July day, the only thing I wanted after work was a swim in the ocean. |
| **tower** | v. To stand above or higher than what is around it.  
The Statue of Liberty **towers** above New York Harbor. |
| **towering** | adj. Very high; tall.  
Looking up at the **towering** skyscrapers gave me a stiff neck. |

---

### 2A Finding Meanings

Choose two phrases to form a sentence that correctly uses a word from Word List 2. Write each sentence in the space provided.

1. (a) keep people out of a building.  
(b) support part of a building.  
(c) A column is used to  
(d) A permit is used to

2. (a) A maple grove is  
(b) what is left after it is cut down.  
(c) A maple limb is  
(d) a large branch.

3. (a) A mammoth parade is  
(b) A forbidden parade is  
(c) one held once a year.  
(d) one that is very large.

4. (a) To scorch something is to  
(b) To permit something is to  
(c) look closely into it.  
(d) allow it.
5. (a) A climate is  
(b) a group of trees.  
(c) a group of paintings.  
(d) A grove is

6. (a) To calculate something is to  
(b) figure it out by reasoning.  
(c) To affect something is to  
(d) be against it.

7. (a) If something towers,  
(b) If something decays,  
(c) it is starting to grow.  
(d) it stands above what is around it.

8. (a) to go beyond it.  
(b) To forbid something is  
(c) To exceed something is  
(d) to go back to it.

9. (a) To resist something is  
(b) To affect something is  
(c) to cause a change in it.  
(d) to forget about it.

10. (a) an extra amount.  
(b) A climate is  
(c) a shortage.  
(d) An excess is
Improve each of the following sentences by crossing out the bold phrase and replacing it with a word (or a form of the word) from Word List 2.

1. Pat’s **regular newspaper article** on gardening is very popular with readers.

2. Unfortunately, the cost of those sneakers is more than what I’ve saved so far.

3. I tried to **figure out** how much gas we would use on our trip to Nevada.

4. She **pretended to have** a Southern accent, even though she was from New England.

5. Young people **develop into adults** much earlier than they used to.

6. Arizona’s **usual weather** is very dry.

7. My parents **do not allow** television during the week.

8. Even though I’m dieting, I find it hard to **avoid giving in to my wish for** fried foods.

9. If you apply heat to a compost pile, it speeds up the **process of the breaking down** of vegetable matter.

10. It is so **extremely hot** today that the plants on our front steps are all drooping.
2c Applying Meanings

Circle the letter or letters of each correct answer. A question may have more than one correct answer.

1. Which of the following could be thought of as towering?
   (a) an eight-foot person
   (b) an eight-foot tree
   (c) a 100-foot flagpole
   (d) a 100-meter race

2. For which of the following might you need a permit?
   (a) camping in a park
   (b) setting lobster traps
   (c) keeping a dog
   (d) owning a goldfish

3. Which of the following help(s) the body to resist disease?
   (a) greasy food
   (b) exercise
   (c) germs
   (d) clothing

4. Which of the following decay(s)?
   (a) snow and ice
   (b) metal posts
   (c) fallen trees
   (d) cut grass

5. Which of the following are forbidden?
   (a) stealing
   (b) cheating
   (c) breathing
   (d) speeding

6. Which of the following can be scorched?
   (a) the bark of a tree
   (b) a new shirt
   (c) a clever idea
   (d) a pool of water

7. In which of the following might you see a grove of trees?
   (a) a large park
   (b) a large field
   (c) a parking lot
   (d) a tall building

8. Which of the following is a limb?
   (a) a bird’s wing
   (b) a bird’s leg
   (c) a tree branch
   (d) a tree root
Antonyms are words that have opposite or nearly opposite meanings. Enter and exit are antonyms. Enter means "to go in," and exit means "to go out."

Circle the two antonyms in each group of four words.

<table>
<thead>
<tr>
<th>1. develop</th>
<th>deny</th>
<th>decay</th>
<th>design</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. exceed</td>
<td>permit</td>
<td>affect</td>
<td>forbid</td>
</tr>
<tr>
<td>3. speed</td>
<td>difficulty</td>
<td>ease</td>
<td>care</td>
</tr>
<tr>
<td>4. resist</td>
<td>remark</td>
<td>surrender</td>
<td>surprise</td>
</tr>
<tr>
<td>5. hurry</td>
<td>start</td>
<td>rush</td>
<td>complete</td>
</tr>
<tr>
<td>6. harm</td>
<td>benefit</td>
<td>understand</td>
<td>forget</td>
</tr>
<tr>
<td>7. mammoth</td>
<td>tiny</td>
<td>sufficient</td>
<td>mature</td>
</tr>
<tr>
<td>8. ease</td>
<td>joy</td>
<td>dislike</td>
<td>dismay</td>
</tr>
<tr>
<td>9. angry</td>
<td>childish</td>
<td>mature</td>
<td>unusual</td>
</tr>
<tr>
<td>10. lack</td>
<td>prize</td>
<td>award</td>
<td>excess</td>
</tr>
</tbody>
</table>
Read the passage. Then answer the questions that follow it.

**California's Forest Giants**

Along the coast of northern California grow huge, towering trees. Their trunks look like the columns of a great Greek temple. These are redwood trees—the tallest of all trees. They can reach a height of 385 feet. Their trunks can grow straight up for 150 feet before the first limbs branch out. One redwood, called the Rockefeller Tree, is as tall as a thirty-five-story skyscraper!

Because redwoods are so special, there are laws to protect them. In California, state laws forbid people to cut them down in some areas. But in other parts of the state, logging of redwoods is permitted. Redwood is sold for use in buildings and outdoor furniture. It is useful because it does not decay as quickly as other kinds of wood.

Another enormous California tree is the sequoia. Sequoias are slightly shorter than redwoods. They prefer the colder, drier climate found farther inland on the slopes of the Sierra Nevada. Sequoias have thicker trunks and contain more wood than redwoods. In fact, it has been calculated that a full-grown sequoia contains enough wood to build thirty houses. The mammoth General Grant sequoia is almost a hundred feet around. It would take twenty people with arms stretched out to join hands around it! Cutting down any sequoia is not allowed.

Redwoods and sequoias are among the oldest living things: the age of some of them exceeds three thousand years. One reason they live so long has to do with their bark. When they are mature, their bark is more than a foot thick. Forest fires don't usually affect these trees seriously; the flames only scorch their surface. The thick bark also helps them resist diseases that kill other trees.

Yosemite National Park and Sequoia National Park are the best places to see sequoias. Both parks are in eastern California. The best place to see redwoods is Redwood National Park, in northwest California. To wander through a grove of sequoia or redwood trees is to enter a strange and beautiful world. You will feel like you are walking among giants.
Answer each of the following questions in the form of a sentence. If a question does not contain a vocabulary word from the lesson’s word list, use one in your answer. Use each word only once.

1. What happens to sequoias and redwoods in a forest fire?

2. Where can you find groves of redwoods?

3. Are people allowed to cut down redwood trees in all parts of California?

4. How far from the ground are the lowest branches of the redwoods?

5. What do the trunks of redwoods look like?

6. How old are the oldest sequoia and redwood trees?

7. Why is towering a good word to use to describe these trees?

8. When is their bark thickest?
9. How does their thick bark help the trees stay healthy?

10. Could you cut down a sequoia?

11. Why is redwood used for building outdoor furniture?

12. Why don't sequoias grow along the coast?

13. How thick is the trunk of the General Grant tree?

14. How much wood does a full-grown sequoia contain?

15. Why have redwoods and sequoias lived so long?
- An easy way to learn simple arithmetic is to set out pebbles in a row. By adding more pebbles and counting the total, or by taking some away and counting the ones that remain, one can see the results of addition and subtraction. By using rows of pebbles, one can also learn multiplication. Pebbles arranged in three rows of four can be counted one at a time to see that 3 times 4 equals 12. By separating the pebbles into equal-sized groups, one can also learn division. For example, dividing the pebbles into two equal groups and counting the pebbles in one of them shows that 12 divided by 2 equals six. The Romans long ago thought of this method of doing math. In fact, our word calculate comes from the Latin word calculus, which means—a pebble!

- Tens of thousands of years ago, a giant elephant lived in Europe and North America. It was called a mammoth. It was bigger than today's elephants; the largest ones were almost fourteen feet from the ground to the shoulder. It had huge tusks that curved downward and a thick, hairy coat. Mammoths died out long ago, but the bodies of some of them were frozen solid in the northern regions of Canada and Russia. They are sometimes found when the ice around them melts. Because of this creature's great size, its name became the adjective mammoth, meaning "very large; huge."
**Word List**

**Study the definitions of the words. Then do the exercises that follow.**

<table>
<thead>
<tr>
<th>Word</th>
<th>Definition</th>
</tr>
</thead>
</table>
| **approach**<br>_/ə prəch'/ | v. To go closer to. The vet approached the wounded deer carefully.  
    n. 1. A coming closer. My grandparents dread the approach of winter.  
    2. A road or way that leads to a place. The approach to the beach was blocked by a fallen tree. |
| **burrow**<br>/bərə/ | v. 1. To dig a hole or tunnel into or under something. Turtles burrow into soft sand to lay their eggs.  
    2. To dig deeply into; to search. The clerk burrowed through the pile of papers on his desk.  
    n. A hole or tunnel dug by an animal as a home or for protection. A mole spends most of its time in its burrow. |
| **cease**<br>/sēz/ | v. To stop; to come or bring to an end. After several hours of thunder and lightning, the storm finally ceased. |
| **destructive**<br>/di strək'tiv/ | adj. Causing harm or damage. Cutworms are very destructive garden insects.  
    destruction  n. Harm or damage. When Hurricane Katrina hit the Louisiana coast, it caused great destruction. |
| **drowsy**<br>/drōzē/ | adj. Tired or sleepy. Lying in the sun always makes my cat, Inky, drowsy. |
| **famished**<br>/fə mish/ | adj. Very hungry. Sometimes I work through my lunch hour, so by suppertime I am famished! |
| **forecast**<br>/fər kast/ | v. To figure out and say what will happen before it takes place. Our fishing guide forecast a good catch.  
    n. A telling of what will happen. As soon as Carlos gets up, he turns on the weather forecast. |
| **hibernate**<br>/hi bər nət/ | v. To spend the winter in a resting state. Groundhogs hibernate because they can't find enough food in the winter. |