

Apple Ag Mag - Vocabulary

Denotative and Connotative Meanings

Directions: Choose the word with the more positive meaning to complete each of the sentences below.

The denotative meaning of a word is its actual meaning. The connotative meaning of a word is the positive or negative association that the word brings about.

1. The early settlers _____ (educated, directed) the Native Americans on how to grow apples.
2. A ripe apple will have _____ (less, reduced) starch because most of it has been converted to sugar.
3. The GoldRush apple is a _____ (great, good) apple to grow because it is disease resistant.
4. Since every apple seed is made of its own _____ (strange, unique) set of genetic materials, each seed produces a different kind of apple.
5. Bees are _____ (important, necessary) for pollination.
6. Each variety of apple requires _____ (different, bizarre) conditions to help keep it fresh in Controlled Atmosphere Storage.
7. Apple trees are _____ (impossible, difficult) to grow from seed.
8. New trees created by grafting or budding live in a _____ (secluded, protected) nursery for about twelve months.

Apple Ag Mag - Math - Using Variables

Directions: Choose the best answer.

1

$$c + d = \underline{\hspace{2cm}}$$

- A $a + b$
- B $d + c$
- C $b + c$
- D $a + c$

2

$$(a + c) + b = \underline{\hspace{2cm}}$$

- A $c - (a + b)$
- B $a \times (b + c)$
- C $c \times (b + a)$
- D $a + (c + b)$

3

If $c < d$ and $d < r$, then ____.

- A $c > r$
- B $c = r$
- C $r > c$
- D $r > d$

4

$$f(a + d) = \underline{\hspace{2cm}}$$

- A $f \times a \times d$
- B $f \times a + a \times d$
- C $f \times a + f \times d$
- D $f + a \times f + d$

Apple Ag Mag - Math - Using Variables

Directions: Choose the best answer.

5

If $a < 93$ and $a > 29$, which of the following is a possible value of a ?

- A 3
- B 64
- C 122
- D 16

6

$$(c + d)a = \underline{\hspace{2cm}}$$

- A $c + d + a$
- B $c \times d + d \times a$
- C $c \times a + d \times a$
- D $c \times d \times a$

7

If c is a whole number, which of the following statements is true?

- A If $11 \times c = 33$, then $33 \div c = 11$
- B If $c - 3 = 11$, then $3 + c = 11$
- C If $c + 3 = 11$, then $11 + 3 = c$
- D If $3 \times c = 11$, then $c \times 11 = 3$

8

If $x < 45$ and $x > 33$, then which of the following is a possible value of x ?

- A 9
- B 57
- C 16
- D 41

Apple Ag Mag - Reading Passage

Taken from *Science in Your Shopping Cart* by USDA

Apples are an all-American success story—each of us eats more than 19 pounds of them annually. Thanks to fruit-breeding research, we're able to enjoy more productive, healthy, and flavorful new varieties every year. And we're collecting and preserving the world's bounty of apple genestock so the apples of tomorrow may be even sweeter, crunchier, and better than ever.

Think about the quality of the apples you buy at the supermarket: They may have been stored for as long as 9 months, but you can bet they remain crisp, thanks to controlled-atmosphere-storage methods devised by scientists. Never before have growers had a better chance against pests and diseases in the apple orchard, thanks to new, nonchemical biocontrols. Scientists have toiled to harness naturally occurring yeasts and bacteria and turn them against apple's enemies.

Fresh apple slices are now available at McDonald's, grocery stores like Trader Joe's, and in the school lunch program since scientists developed a coating that prevents apples from browning. The coating increases the shelf life of peeled apples without changing the texture or flavor, allowing them to become a practical retail offering and providing a convenient healthy food option for consumers. Putting new apple options on its menu has made McDonald's the largest restaurant or food service buyer of fresh apples. NatureSeal, the trade name for the technology, is also available to the public to help protect apples in every household.

1

What title best gives the main idea of this passage?

- A The History of Apples
- B Apples at McDonald's
- C Apples Anytime, Anywhere
- D An Apple a Day

2

What is not true of this passage?

- A It discusses controlled atmosphere-storage methods
- B It praises advancement in biotechnology
- C It introduces a product called NatureSeal
- D It discusses different types of apples

Apple Ag Mag - Reading Passage

Directions: Read each question and choose the best answer.

3

What sentence is an opinion?

- A Fresh apple slices are now available at McDonald's.
- B Apples are the best fruit ever.
- C NatureSeal is available to the public.
- D Apples can be stored for 9 months in controlled-atmosphere storage facilities.

4

Which statement is true?

- A NatureSeal is the largest producer of apples.
- B Every year each of us eats 29 pounds of apples.
- C McDonald's is the largest restaurant or food service buyer of fresh apples.
- D Apples can only be stored for 4 months.

5

Why do you suppose people eat as many apples as they do each year?

- A They are a healthy snack.
- B They are inexpensive.
- C They are easy to find in the store.
- D They are available year round.

6

What is the author's purpose for writing this passage?

- A To entertain readers with apple trivia.
- B To inform readers about improvements in apples.
- C To persuade readers to eat more apples.
- D To inform readers about health benefits of apples.

Extended Response—APPLE

Explain why the bee plays an important role in the life cycle of the apple. Be sure to think about information from the Apple Ag Mag along with your own knowledge of the process of pollination.