

Name:

Date:

Class:

Lesson 8.2: Practical Mathematics in Agriculture

Know and Understand

Answer the following questions using the information provided in this lesson.

1. Why should producers in the United States know conversion factors? (8.2.1)
 - A. The United States regulates the weights of commodities in other countries.
 - B. It is illegal to sell US products using metric measurements.
 - C. There are no US measurements for fluid quantity.
 - D. US measurements are not used in other countries.

Answer:

2. Why do differences occur in the weight of bushels for different commodities? (8.2.1)
 - A. A bushel is a unit of volume, not weight.
 - B. Bushels are only used to measure wet crops, not dried products.
 - C. Most crops weigh more when freshly harvested.
 - D. Each state can determine how much is included in a bushel.

Answer:

3. How many cups are in a gallon? (8.2.1)
 - A. 2
 - B. 4
 - C. 8
 - D. 16

Answer:

4. Which of the following lists the four basic arithmetic functions? (8.2.1)
 - A. Algebra, geometry, ratios, percentages
 - B. Arithmetic, division, fractions, ratios

- C. Addition, subtraction, multiplication, division
- D. Arithmetic, multiplication, statistics, ratios

Answer:

5. Which of the following crops is heaviest by the bushel? (8.2.1)

- A. Barley
- B. Corn
- C. Oats
- D. Soybeans

Answer:

6. Predetermined mathematical patterns used to find the unknown values are _____. (8.2.2)

- A. formulas
- B. measurements
- C. geometric units
- D. None are correct.

Answer:

7. Which area of mathematics is a land surveyor most likely to use in calculating field sizes? (8.2.3)

- A. Algebra
- B. Geometry
- C. Statistics
- D. Computational mathematics

Answer:

8. What is the difference between area and volume? (8.2.3)

- A. Area can only be used on round objects.
- B. Area measures two-dimensional () spaces, and volume measures spaces.
- C. Area is a unit of weight, and volume is a unit of mass.

D. Area is for dry quantities, and volume is for fluid quantities.

Answer:

9. The area of most agricultural land is measured in _____. (8.2.3)

A. acres

B. bushels

C. hectares

D. square feet

Answer:

10. If the sides of a right triangle are 3" and 4", how long is the hypotenuse? (8.2.3)

A. 3"

B. 4"

C. 5"

D. 6"

Answer:

11. Which area of mathematics is the most commonly used in all agricultural applications? (8.2.3)

A. Statistics

B. Arithmetic

C. Geometry

D. Fractions

Answer:

12. Which of the following describes statistics? (8.2.4)

A. Collect and analyze large quantities of numerical data to relate findings to unknown data.

B. Involves the study of physical, biological, or sociological areas.

C. Focused on understanding spatial relationships and geometric shapes.

D. The comparative value of two or more quantities.

Answer:

13. *True or False?* Developing computer-coded algorithms for agricultural software programs and applications is the application of computational mathematics.
(8.2.5)

Answer: