NORTH CAROLINA FFA ASSOCIATION
MILK QUALITY AND PRODUCTS CAREER DEVELOPMENT EVENT

2016 TEAM ACTIVITY
FOOD SAFETY AND SANITATION

Maximum Points = 50

Chapter Name_____ Chapter Number_____ Score _____

Directions: Place your name and chapter number in the space above. Read each of the following multiple-choice items and possible answers carefully. Circle the letter of the correct answer on this sheet as instructed.

Please examine the graph below for Per Capita Consumption and Annual Percent Change for Selected Dairy Products, 2013-2014 (Dairy Facts, pg. 55, 2015 Edition) to answer questions 1 and 2.

¹Includes both hard and soft serve. ²Includes Half & Half, and Light & Heavy Creams.
Source: IDFA calculations from USDA, ERS data

1. When comparing 2013-2014 per capital consumption and annual percent change for nonfat white milk to other dairy products on the chart, which statement is ***not*** accurate?

   a. The annual percentage change for nonfat whole milk was more than the combined total percent change for all types of cheese.
   b. The annual percentage change for nonfat whole milk was more than the combined total percent change for all types of ice cream.
   c. The annual percentage change for nonfat whole milk was more than the combined total percent change for all other types of milk.
   d. The annual percentage change for nonfat whole milk was more than the combined total percent change for cottage cheese, sherbet, sour cream and yogurt.

2. According to the graph **Per Capita Consumption and Annual Percent Change for Selected Dairy Products, 2013-2014 (Dairy Facts, pg. 55, 2015 Edition)** on page 1, other style cheese includes:

   a. Half and Half
   b. Italian Style Cheese
   c. Process Cheese
   d. Sour Cream

Please use the information provided below along with the formula for calculating the value of protein for Class III milk to answer questions 3 and 4.

Information provided:

- NASS weighted average cheese price = 1.50
- Make allowance = 0.17
- Yield factor attributable to protein = 1.38
- Yield factor attributable to fat = 1.57
- Butterfat price = 2.28
- Average ratio of fat to protein in milk = 1.17

Formula to be used: Protein value/lb. = ((cheese price – make allowance) x protein's yield factor) + ((((cheese price – make allowance) x fat's yield factor)) – butterfat price x 0.9) x fat to protein ratio)

Solution: = ((____ – ____) x _____) + ((((____ – ____) x _____) – _____ x 0.9) x _____) = **$_____/lb. protein**

3. Circle the correct answer for the value of protein and show your work in the box at bottom of page 2 **(an answer without the correct work shown in the box on the bottom of page 2 will be counted as wrong)**:

    a. 1.91
    b. 2.34
    c. 1.97
    d. 2.03

4. Based on the information provided, the yield factor for fat is:

    a. Added to the butterfat price to get value of protein per pound.
    b. Equal to the fat to protein ratio in the milk.
    c. Higher than the yield factor for protein.
    d. Lower than the yield factor for protein.

Compare the two graphs from page 64 of Dairy Facts, 2015 Edition found on the next page to answer question 5 below.

5. Based on the information provided in the two graphs **Per Capita Consumption of Natural Cheese, Selected Years** and **Per Capita Consumption of U.S. Process Cheese Products, Selected Years**, which statement is true?

    a. For the year 2010, process cheese consumption was more than 4 pounds and Italian-type cheese per capita consumption was 10 pounds.
    b. More pounds of cold pack and cheese spreads were consumed than all other natural cheeses other than American-type and Italian type cheeses in 2014.
    c. Process cheese products had their highest year of consumption while total natural cheese consumption had its third highest year.
    d. The pounds of total natural cheese products consumed in 2014 were at least four times the total pounds of process cheese products consumed in 2014.

Per Capita Consumption of Natural Cheese, Selected Years

Source: USDA, Economic Research Service

Per Capita Consumption of U.S. Process Cheese Products, Selected Years

Source: USDA, Economic Research Service