

National FFA Organization  
2013 Meats Evaluation & Technology CDE  
Meat Formulation Problem Solving

USDA Food Standards and Labeling Policy for Ground Beef:

May not contain added fat. Maximum total fat 30 percent. Cheek meat is permitted up to 25 percent and must be declared in the ingredients statement. For more than 25 percent, show as "Ground Beef and Cheek Meat," all the same size. Beef of skeletal origin or from the diaphragm or esophagus (weasand) may be used in the preparation of chopped beef, ground beef, or hamburger. Heart meat and tongue meat as organ meats are not acceptable ingredients in chopped beef, ground beef, or hamburger.

Specifications on ground beef for this activity:

1. Ingredients must be beef.
2. No variety meats may be used.
3. No product more than three days old may be used.
4. All fresh products must be stored at a temperature not to exceed 34° F.
5. Least cost determined should be performed on acceptable ingredients to select the lowest cost product that meets all ground beef guidelines.

You have received an order with the following specifications:

Desired fat content of finished product = 8%  
Batch size = 1,250 lbs.  
Manufacture date = Thursday, October 31, 2013

Available Ingredients

| Product        | Slaughter Date | Temp. "°F" | % Fat Content | \$ Price/lb. |
|----------------|----------------|------------|---------------|--------------|
| 90% Lean Trim  | October 29     | 32°        | 10%           | 2.21         |
| Beef Chucks    | October 28     | 32°        | 17%           | 1.78         |
| Beef Bin #7    | October 27     | 33°        | 7%            | 1.83         |
| Trimmed Rounds | October 28     | 32°        | 6%            | 1.84         |
| Lamb Shoulders | October 28     | 33°        | 19%           | 2.33         |
| 80% Lean Trim  | October 29     | 33°        | 20%           | 1.94         |
| Sirloins       | October 28     | 35°        | 13%           | 2.34         |

**Instructions: Carefully read each item and possible answers. Mark the correct answer on the Meats CDE form #239562-4. Completely fill the chosen oval to indicate your answer.**

**Meat Formulation Problem Solving  
Solution**

Which of the following was the correct formulation for this problem?

1. 80% Lean Trim & Beef Bin #7
2. 80% Lean Trim & Trimmed Rounds
3. 90% Lean Trim & Beef Bin #7
4. 90% Lean Trim & Trimmed Rounds
5. Beef Bin #7 & Trimmed Rounds
6. Beef Chucks & Beef Bin #7
7. Beef Chucks & Trimmed Rounds
8. Lamb Shoulders & Beef Bin #7
9. Sirloins & Beef Bin #7
10. Sirloins & Trimmed Rounds

**Meat Formulation Problem Solving  
Questions**

1. What was the total cost of the correct final batch?
  - A. \$1,830.00
  - B. \$2,286.50
  - C. \$2,317.50
  - D. \$2,428.75
  - E. \$2,531.25
2. What was the price per pound of the correct final batch?
  - A. \$1.83
  - B. \$1.85
  - C. \$2.03
  - D. \$2.29
  - E. \$2.32
3. What percentage of the correct final batch was Beef Chucks?
  - A. 0%
  - B. 18%
  - C. 22%
  - D. 82%
  - E. 100%
4. How much lean was in the correct final batch?
  - A. 0 lbs.
  - B. 92 lbs.
  - C. 100 lbs.
  - D. 1,150 lbs.
  - E. 1,250 lbs.
5. How much of the correct final batch consisted of 80% Lean Trim?
  - A. 0%
  - B. 14%
  - C. 20%
  - D. 80%
  - E. 100%
6. Which potential product was excluded based on freshness?
  - A. 90% Lean Trim
  - B. Beef Bin #7
  - C. Beef Chucks
  - D. Lamb Shoulders
  - E. Sirloins
7. How much Trimmed Rounds was in the correct final batch?
  - A. 0 lbs.
  - B. 225 lbs.
  - C. 625 lbs.
  - D. 1,025 lbs.
  - E. 1,075 lbs.

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|                   |
|-------------------|
| <b><i>KEY</i></b> |
|-------------------|

| <u>Item</u> | <u>Answer</u> |
|-------------|---------------|
| Solution    | #7            |
| 1.          | B             |
| 2.          | A             |
| 3.          | B             |
| 4.          | D             |
| 5.          | A             |
| 6.          | B             |
| 7.          | D             |