

National FFA Organization
2016 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. All fresh products must be stored at a temperature not to exceed 30° F.
3. No product more than three days old may be used.
4. No variety meats may be used.
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 = 11%

Batch size = 2,500 lbs.

Manufacture date = Wednesday, October 19, 2016 [RH1]

Available Ingredients

Product	Slaughter Date	Temp. “°F”	% Fat Content	\$ Price/lb.
Picnic Shoulders	October 16	30°	18%	1.01
80% Lean Beef Trim [RH2]	October 16	29°	20%	1.90
90% Lean Beef Trim	October 15	30°	10%	2.04
Beef Hearts	October 17	31°	7%	.84
Beef Scrap A	October 16	29°	50%	.57
Beef Rounds	October 17	30°	8%	1.95
Beef Scrap C	October 16	30°	19%	1.85

Instructions: Carefully read each item and possible answers. Mark the correct answers on the appropriate CDE form. Completely fill the chosen ovals to indicate your answers. You may write on this exam and utilize the back of other printed exams for scratch paper.

**Meat Formulation Problem Solving
Solution**

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

1. 80% Lean Trim & Beef Rounds
2. 90% Lean Trim & 80% Lean Trim
3. 90% Lean Trim & Beef Scrap A
4. 90% Lean Trim & Beef Scrap C
5. Beef Hearts & Beef Rounds
6. Beef Hearts & Beef Scrap A
7. Beef Scrap A & Beef Rounds
8. Beef Scrap A & Picnic Shoulders
9. Beef Scrap C & Beef Rounds
10. Beef Hearts and Picnic Shoulders^[RH3]

**Meat Formulation Problem Solving
Questions**

1. What was the total cost of the correct final batch?
 - A. \$1,850.00
 - B. \$1,940.00
 - C. \$4,633.50
 - D. \$4,807.50
 - E. \$4,843.75
2. What was the price per pound of the correct final batch?
 - A. \$1.85
 - B. \$1.90
 - C. \$1.92
 - D. \$1.94
 - E. \$4.63

3. How much of the correct final batch consisted of lean?

- A. 0 lbs.
- B. 11 lbs.
- C. 89 lbs.
- D. 275 lbs.
- E. 2,225 lbs.

4. What percentage of the correct final batch consisted of Beef Rounds?

- A. 0%
- B. 7%
- C. 39%
- D. 73%
- E. 93%

5. What percentage of the correct final batch consisted of Beef Scrap C?

- A. 0%
- B. 3%
- C. 7%
- D. 27%
- E. 93%

6. Which product was excluded from the correct final batch due to freshness?

- A. 90% Lean Trim
- B. Beef Hearts
- C. Picnic Shoulders
- D. Beef Rounds
- E. All products met the freshness standard.

7. What was the dollar value of Beef Scrap A in the correct final batch?

- A. \$0.00
- B. \$99.75
- C. \$175.00
- D. \$2,325.00
- E. \$4,533.75

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<i>KEY</i>

<u>Item</u>	<u>Answer</u>
Solution	#7
1.	C
2.	A
3.	E
4.	E
5.	A
6.	A
7.	B