

National FFA Organization
2015 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 four days old may be used.
4. All fresh products must be stored at a temperature not to exceed 32° 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 = 15%
Batch size = 1,500 lbs.
Manufacture date = Wednesday, October 28, 2015

Available Ingredients

Product	Slaughter Date	Temp. “°F”	% Fat Content	\$ Price/lb.
70% Lean Trim	October 22	32°	30%	1.95
80% Lean Trim	October 25	33°	20%	2.33
90% Lean Trim	October 23	32°	10%	2.59
Scrap Bin-Beef	October 24	30°	8%	2.04
Lamb Shoulders	October 25	31°	28%	3.76
Beef Rounds	October 26	30°	12%	2.16
Beef Chucks	October 25	31°	23%	2.05

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. 70% Lean Trim & 90% Lean Trim
2. 70% Lean Trim & Lamb Shoulders
3. 80% Lean Trim & 90% Lean Trim
4. Beef Rounds & 70% Lean Trim
5. Beef Rounds & 80% Lean Trim
6. Beef Rounds & Beef Chucks
7. Scrap Bin-Beef & 70% Lean Trim
8. Scrap Bin-Beef & 80% Lean Trim
9. Scrap Bin-Beef & Beef Chucks
10. Scrap Bin-Beef & Beef Rounds

**Meat Formulation Problem Solving
Questions**

1. What was the price per pound of the correct final batch?
 - A. \$1.95
 - B. \$2.00
 - C. \$2.01
 - D. \$2.04
 - E. \$2.13
2. What was the total cost of the correct final batch?
 - A. \$2,040.00
 - B. \$2,130.00
 - C. \$3,016.80
 - D. \$3,067.05
 - E. \$3,195.45

3. Which listed product was excluded from the correct final batch because of freshness?
 - A. 80% Lean Trim
 - B. 90% Lean Trim
 - C. Beef Rounds
 - D. Lamb Shoulders
 - E. Scrap Bin-Beef
4. How much of the correct final batch was lean?
 - A. 0%
 - B. 13%
 - C. 15%
 - D. 23%
 - E. 85%
5. What percentage of the correct final batch consisted of Beef Chucks?
 - A. 0%
 - B. 27%
 - C. 47%
 - D. 53%
 - E. 73%
6. How much of the correct final batch consisted of Beef Rounds?
 - A. 0 lbs.
 - B. 405 lbs.
 - C. 705 lbs.
 - D. 795 lbs.
 - E. 1,095 lbs.
7. What was the dollar value of Scrap Bin-Beef in the correct final batch?
 - A. \$0.00
 - B. \$1,445.25
 - C. \$1,621.80
 - D. \$2,080.80
 - E. \$3,067.05

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<i>KEY</i>

<u>Item</u>	<u>Answer</u>
Solution	#9
1.	D
2.	D
3.	B
4.	E
5.	C
6.	A
7.	C