

2017 Virginia Tech Block and Bridle Meats Judging Contest
Sr. FFA Formulation Problem



Contestant Number _____ Name _____ KEY _____

50 points, 30 Minutes

BE SURE TO USE A #2 PENCIL AND FILL IN CORRECT BUBBLES!

**ROUND EACH STEP OF CALCULATIONS AND FINAL ANSWER TO
TWO DECIMAL PLACES**

USDA REGULATIONS FOR GROUND BEEF:

GROUND BEEF: The terms “Ground Beef” and “Chopped Beef” are synonymous. Products must be made with fresh and/or frozen beef with or without seasoning and without the addition of fat as such and shall contain no more than 30% fat. It may contain beef cheek not to exceed 25%. It may contain added water, binders or extenders. Heart and tongue meat are not acceptable as ingredients. The Technical Requirements Schedule (TRS) – GB 2007 requires potential contracts to designate, in their technical proposal, a laboratory to conduct microbiological testing of boneless beef.

Assume that you are a production supervisor at a large meat processing company. You have won the bid to make “VT Hokie Beef”. The following are company policies that must be followed to make “VT Hokie Beef”.

1. All fresh products must be stored at a temperature not exceeding 33°F.
2. No variety meat may be used.
3. No products over 3 days old may be used.
4. The finished product must be made of all beef.
5. The least cost shall be determined and performed on acceptable ingredients to select the lowest cost combination of products which meet all ground beef guidelines.

You have received an order for “VT Hokie Beef” with the following order specifications;

- The desired fat content of the finished product is 16%
- The batch size is 3500 pounds
- It will be manufactured and processed on March 23, 2017.

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Boneless Meats Available

Material	Slaughter Date	Temperature °F	Fat Content %	Price (\$ dollars per pound)
40% Lean Trim	March 23, 2017	32°F	33%	\$1.47
Beef Chuck	March 22, 2017	34°F	31%	\$1.99
80% Lean Trim	March 21, 2017	33°F	25%	\$1.70
Beef Heart	March 20, 2017	32°F	20%	\$0.38
Pork Tenderloin	March 22, 2017	32°F	14%	\$2.07
Bull Meat	March 22, 2017	30°F	12%	\$0.37
60% Lean Trim	March 23, 2017	31°F	43%	\$1.63
Beef Riblets	March 19, 2017	31°F	50%	\$0.90

Please select the correct combination and fill it in on the appropriate spot on your score sheet.

01. Beef Heart and Beef Chuck at \$0.78/lb.
02. 80% Lean Trim and Beef Riblets at \$2.97/lb.
03. Bull Meat and Pork Tenderloin at \$1.90/lb.
04. **60% Lean Trim and Bull Meat at \$0.53/lb.**
05. Beef Chuck and 80% Lean Trim at \$2.26/lb.
06. Bull Meat and 80% Lean Trim at \$0.78/lb.
07. 40% Lean Trim and Beef Chuck at \$1.57/lb.
08. 60% Lean Trim and 80% Lean Trim at \$2.27/lb.
09. Beef Heart and 40% Lean Trim at \$0.35/lb.
10. 40% Lean Trim and Bull Meat at \$0.58/lb.

Please select the best answer for each question. Bubble the answer in on your scantron.

- ____ 1. What was the total cost of the correct final batch?
A. \$1234.50 **B. \$1855.00** C. \$1838.50 D. \$1766.00
- ____ 2. Which ingredients did not meet company freshness requirements?
A. Bull meat B. 60% Lean Trim C. 40% Lean Trim **D. Beef Riblets**
- ____ 3. How many pounds of fat are in the finished batch?
A. 525 lbs. B. 420 lbs. **C. 560 lbs.** D. 600 lbs.
- ____ 4. How many pounds of 80% lean trim are in the finished batch?
A. 630 lbs. B. 875 lbs. **C. 0 lbs.** D. 1100 lbs.
- ____ 5. Which available meat can be legal ground beef by itself?
A. Beef Heart **B. Bull Meat** C. Beef Chuck D. 40% Lean Trim