You own and operate a backgrounding operation that specializes in purchasing bawling calves and feeding them for 60 days followed by direct merchandising of the calves to feed yards in the Midwest and in Pennsylvania (Do not round any math until the final answer for each question).

1. You bought 55 head of 525 pound bull calves in North Carolina. What is the gross weight of the pen of 55 calves you purchased in North Carolina?
   Answer: 55 head x 525 pounds = 28,875 pounds

2. You paid $135/cwt. for the pen of calves. What is the amount you owe the stockyard for the pen of calves?
   Answer: $135 x 288.75 cwt = $38,981.25

3. The distance from the stockyard to your processing barn is 185 miles. The trucking company charges you $3.80 per loaded mile for hauling the cattle. How much do you owe the trucking company per calf (round to the nearest penny)?
   Answer: (185 miles x $3.80 per mile)/55 head = $12.78/head

4. While processing you re-weighed the calves and determined you had a 3% shrink. What does the pen of calves now weigh (round to the nearest whole pound)?
   Answer: 28,875 pounds x .97 = 28,009 pounds

5. During the backgrounding period, you had 2 calves die. What is your percent death loss on the pen of calves (round to the nearest tenth)?
   Answer: (2/55) x 100 = 3.6%

6. Using just the purchase price, how much does the loss of 2 calves cost your operation?
   Answer: $1.35 x 525 pounds x 2 head = $1417.50

7. During the backgrounding period you treated 12 calves for pneumonia-like symptoms. To treat the sick calves, your veterinarian prescribed the antibiotic of Nuflor. The treatment tells you to administer 6mL/100 lbs. to the sick calves. How much Nuflor do you need to administer to each sick calf?
   Answer: (525 pounds / 100 pounds) = 5.25 x 6mL = 31.5mL

8. The cost of Nuflor is $289.95 per 500 mL bottle. How much does it cost to treat the 12 calves (Round to the nearest penny)?
   Answer: (31.5mL x 12 head = 378 mL); ($289.95/500mL = $.5799/mL); 378mL x $.5799/mL = $219.20

9. You will feed the group a commodity that will equal 1% of their purchased body weight (525 pounds). Cost of the starter rations is $325 per ton. The calves will also be fed second cutting grass hay at a rate of 2% of their purchased body weight. The cost of the grass hay is $40 per

800-pound bale of hay. What is the cost of feeding the pen of calves for the 60-day backgrounding period based on the 53 live calves (Round to the nearest penny).

Feed=
525 lbs/calf x53 calves=27825 lbs total
27825 total lbsx 0.01= 278.25 lbs/day
278.25 lbs/day x 60 days on feed= 16695 lbs/day
(16695 lbs/day)/2000 lbs in 1 ton= 8.3475 tons
8.3475 tons x $325= $2712.94

Hay=
525 lbs/calf x 53 calves= 27825 lbs total
27825 total lbs x 0.02= 556.5 lbs/day
556.5 lbs/day x 60 days= 33390 lbs/day
(33390 lbs/day)/ 800 lbs in 1 round bale= 41.74 bales
41.74 bales x $40= $1669.50

Total hay and feed price= $2712.94+ $1669.50= $4382.44

10. In 60 days you plan to sell these calves as weaned calves. The average daily gain on this pen of calves is 2.1 lbs. What is your breakeven price per hundredweight (rounded to the nearest dollar) considering all costs (including death loss)?
    Answer: (60 days x 2.1 pounds/day = 126 pounds + 525 pounds = 651 pounds x 53 head = 34,503 pounds)
    Initial Cost = $38,981.25
    Trucking = $12.78 x 55 head = $702.90
    Nuflor = $219.20
    Feed = $4230.66
    Total Cost = $44134.01
    Breakeven Selling Price = $44,134.01/34,503 pounds = $1.28 x 100 = $128/cwt.