



3. Use the information in **Table 1** to calculate the weighted average somatic cell count for a herd of three cows. The herd includes cows **1, 7, 14**.

Herd Average SCC: \_\_\_\_\_ cells/ml

4. Which cow had the highest feed cost per day? \_\_\_\_\_ (1 pt)

What are two possible reasons for her high feed cost? (4 pt)

5. You are considering starting an on-farm cheese plant to process your own milk. You are milking 210 cows that are averaging 71 pounds of milk per cow per day. On a daily basis, how many pounds of cheese would you expect to produce from the milk produced?

Potential of \_\_\_\_\_ pounds of cheese per day

6. Utilizing the information in **Table 1**, calculate the per hundredweight value of Class I milk that is 4.8% Butterfat, 3.9% Protein, and 6.5% Other Solids. (Other Solids are paid a premium of \$.029/cwt for each point above 5.0%)

\$ \_\_\_\_\_ per hundredweight

7. What would be the estimated 305 day production record for milk, protein, and fat for cow 10 if this was an average production per day?

8. During a 305 day lactation, cows **4, 9, 10, 12** could produce an estimated total of \_\_\_\_\_ gallons of milk?

\_\_\_\_\_ gallons

9. How many pounds of skim milk (0% fat) must be added to 650 pounds of 30.0% cream to reduce the butterfat test of the 650 pounds to 20.0%?

\_\_\_\_\_ pounds of Skim milk

10. How much would your income increase per day if the SCC from all the cows was below 200,000 cells per ml?

24,03

Complete Table 1, cells A thru Y (2 pts. per blank cell, IF legible)

Income Comparisons - Class I @ \$19.65/cwt vs. Class II @ \$15.25										Part I					
Cow	Cow Production				Feed	Premiums		SCC premium per cwt if less than 200,000 cells/ml	BEFORE PREMIUMS Base Per Day \$ Value of Daily Milk if sold as Class I milk @ \$19.65/cwt	BEFORE PREMIUMS Base Per Day \$ Value of Daily Milk if sold as Class II milk @ \$15.25/cwt	WITH PREMIUMS Total Per Day \$ Value of Milk if sold as Class I milk @ \$19.65/cwt	WITH PREMIUMS Total Per Day \$ Value of Milk if sold as Class II milk @ \$15.25/cwt	Class I After Feed: Milk minus Feed Cost per day	Class II After Feed: Milk minus Feed Cost per day	
	Lbs. Milk per Day per Cow	Butterfat %	Protein %	Milk pH		Butterfat premium per cwt	Protein premium per cwt								
Cow 1	69	3.9	4.0	6.4	\$5.65	\$1.00	\$3.45	\$0.00	\$13.56	\$4.91	\$3.81	\$5.23	\$4.13	\$0.49	-\$0.62
Cow 2	82	4.4	3.7	6.6	\$5.45	\$2.25	\$1.38	\$0.00	\$12.51	\$16.63	\$12.51	\$15.48	\$10.98	\$10.03	\$4.56
Cow 3	66	4.4	3.6	6.5	\$5.55	\$2.25	\$0.69	\$0.31	\$10.07	\$15.11	\$8.39	\$11.94	\$9.56	\$7.04	\$7.04
Cow 4	55	4.3	4.1	6.8	\$4.90	\$2.00	\$4.14	\$0.31	\$17.88	\$24.03	\$13.88	\$24.03	\$17.08	\$17.08	\$4.87
Cow 5	91	4.7	4.0	6.5	\$6.95	\$3.00	\$0.69	\$0.31	\$11.20	\$13.48	\$8.69	\$10.97	\$7.38	\$4.87	\$0.43
Cow 6	57	4.7	3.6	6.6	\$6.10	\$3.00	\$4.14	\$0.00	\$5.70	\$7.70	\$8.69	\$7.70	\$6.42	\$6.42	\$0.43
Cow 7	29	4.6	4.1	6.9	\$5.99	\$2.75	\$4.14	\$0.00	\$12.38	\$16.17	\$9.61	\$16.17	\$10.82	\$10.82	\$0.43
Cow 8	63	4.4	4.0	6.4	\$5.35	\$3.75	\$6.21	\$0.31	\$15.13	\$11.74	\$11.74	\$19.65	\$10.28	\$10.28	\$14.55
Cow 9	77	5.0	4.4	6.6	\$5.10	\$3.75	\$6.21	\$0.31	\$15.13	\$11.74	\$11.74	\$19.65	\$10.28	\$10.28	\$14.55
Cow 10	59	3.6	5.0	6.5	\$5.00	\$0.25	\$10.35	\$0.31	\$11.59	\$9.00	\$9.00	\$15.43	\$13.03	\$13.03	\$10.43
Cow 11	88	3.5	3.8	6.7	\$6.84	\$0.00	\$2.07	\$0.00	\$17.29	\$19.11	\$11.59	\$15.24	\$12.27	\$12.27	\$8.40
Cow 12	76	3.5	3.5	7.4	\$5.55	\$0.00	\$0.00	\$0.00	\$12.77	\$14.93	\$11.59	\$11.59	\$9.38	\$9.38	\$6.04
Cow 13	65	3.6	3.7	6.4	\$6.10	\$0.25	\$1.38	\$0.31	\$9.91	\$9.91	\$9.91	\$11.17	\$5.79	\$5.79	\$5.07
Cow 14	55	4.0	4.8	6.5	\$5.75	\$1.25	\$8.97	\$0.00	\$9.76	\$19.88	\$9.76	\$17.06	\$17.06	\$17.06	\$11.40
Cow 15	64	3.8	5.0	6.6	\$5.66	\$0.75	\$10.35	\$0.31	\$9.76	\$19.88	\$9.76	\$17.06	\$17.06	\$17.06	\$11.40

# Problem Solving Part 1

Chapter: \_\_\_\_\_

Chapter Number: \_\_\_\_\_

Team Members: \_\_\_\_\_  
\_\_\_\_\_

Neatly write answers on the corresponding lines below.

A. \_\_\_\_\_

B. \_\_\_\_\_

C. \_\_\_\_\_

D. \_\_\_\_\_

E. \_\_\_\_\_

F. \_\_\_\_\_

G. \_\_\_\_\_

H. \_\_\_\_\_

I. \_\_\_\_\_

J. \_\_\_\_\_

K. \_\_\_\_\_

L. \_\_\_\_\_

M. \_\_\_\_\_

N. \_\_\_\_\_

O. \_\_\_\_\_

P. \_\_\_\_\_

Q. \_\_\_\_\_

R. \_\_\_\_\_

S. \_\_\_\_\_

T. \_\_\_\_\_

U. \_\_\_\_\_

V. \_\_\_\_\_

W. \_\_\_\_\_

X. \_\_\_\_\_

Y. \_\_\_\_\_