Name: $\qquad$

ECON 337: Agricultural Marketing
Spring 2013
Quiz: Dairy Marketing
Please show all your work. Take per pound calculations to four decimal places ( $\mathbf{0 . 0 0 0 0}$ ) and per cwt calculations to two decimal places ( 0.00 ).

1. (5 points) Calculate the butterfat price, nonfat solids price, Class IV skim milk price, and Class IV price.
2. (5 points) Calculate the butterfat price, other solids price, protein price, Class III skim milk price, and Class III price.
3. (5 points) Calculate the Class II butterfat price, Class II nonfat solids price, Class II skim milk price, and Class II price.
4. (5 points) Calculate the Class I butterfat price, Class I skim milk price, and Class I price. The applicable Class I differential is $-\$ 0.80$ per cwt.
5. (5 points) Calculate Producer A’s milk values. Use the Class III calculated values for the protein, butterfat, and other solids rate. The somatic cell count amount equals 350 - (somatic cell count / 1,000 ) and the somatic cell count rate is $\$ 0.00101$.

|  | Producer A |
| :--- | :---: |
| Location/County | Story |
| Class I Price Differential (map) | $\$ 1.80$ |
| Class I Price Differential (calculated) | $-\$ 0.80$ |
| Butterfat | $4.50 \%$ |
| Protein | $3.90 \%$ |
| Other solids | $5.80 \%$ |
| Somatic cell count | 250,000 |
|  |  |
| Milk sold (cwt) | 1,000 |

Producer A’s Milk Values

|  |  | Rate | Value |
| :---: | :---: | :---: | :---: |
| Protein | lbs |  |  |
| Butterfat | lbs |  |  |
| Other solids | lbs |  |  |
| Somatic cell count |  |  |  |
| Producer Price Differential |  |  |  |
| Total value |  |  |  |
| Value per cwt | cwt |  |  |

## Class I:

Class I Price $=($ Class I skim milk price $* 0.965)+($ Class I butterfat price $* 3.5)$
Class I Skim Milk Price = Higher of advanced Class III or IV skim milk pricing factors + applicable Class I differential
Class I Butterfat Price = Advanced butterfat pricing factor + (applicable Class I differential / 100)

## Class II:

Class II Price $=($ Class II skim milk price $* 0.965)+($ Class II butterfat price * 3.5 $)$
Class II Skim Milk Price = Advanced Class IV skim milk pricing factor $+\$ 0.70$
Class II Butterfat Price $=$ Butterfat price $+\$ 0.007$
Class II Nonfat Solids Price = Class II skim milk price $/ 9$

## Class III:

Class III Price $=($ Class III skim milk price $* 0.965)+($ Butterfat price $* 3.5)$
Class III Skim Milk Price $=($ Protein price * 3.1 $)+($ Other solids price *5.9 $)$
Protein Price $=(($ Cheese price -0.2003) $* 1.383)+(((($ Cheese price -0.2003) $* 1.572)-$ Butterfat price *0.9 $) * 1.17)$
Other Solids Price $=($ Dry whey price -0.1991$) * 1.03$
Butterfat Price $=($ Butter price -0.1715 $) * 1.211$

## Class IV:

Class IV Price $=($ Class IV skim milk price $* 0.965)+($ Butterfat price $* 3.5)$
Class IV Skim Milk Price $=$ Nonfat solids price * 9
Nonfat Solids Price $=($ Nonfat dry milk price -0.1678) $* 0.99$
Butterfat Price $=($ Butter price - 0.1715 $) * 1.211$

| Announcement of Class and Component <br> Prices |  |  |  |  |  |
| :--- | ---: | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |
| Product Price Averages: |  |  |  |  |  |
| Butter | $\$ 1.8410$ | (per pound) | Advanced Class III Skim Milk Pricing Factor: | $\$ 13.77$ | (per hundredweight) |
| Nonfat Dry Milk | $\$ 1.5143$ | (per pound) | Advanced Class IV Skim Milk Pricing Factor: | $\$ 11.43$ | (per hundredweight) |
| Cheese | $\$ 2.0146$ | (per pound) | Advanced Butterfat Pricing Factor: | $\$ 2.1171$ | (per pound) |
| Dry Whey | $\$ 0.6480$ | (per pound) |  |  |  |

