**Acupuncture, tea, and rice-Filled Heating Pads**

Karen is an acupuncturist with a busy practice. In addition to acupuncture services, Karen sells teas, herbal supplements, and rice-filled heating pads. Because Karen’s primary income is from acupuncture, she feels that she is providing the other items simply to fill a need and not as an important source of profits. As a matter of fact, the rice-filled heating pads are made by a patient who receives acupuncture for them instead of paying cash.

The rice-filled pads cost Karen $5.00, $8.00, and $12.00, respectively, for small, medium, and large sizes. The ginger tea, relaxing tea, cold & flu tea, and detox tea cost her $2.59 per box plus $5.00 shipping and handling for 24 boxes.

Karen uses a cost plus markup method, whereby she adds the same set amount to each box of tea. She figures that each box costs $2.59 plus $0.21 shipping and handling, which totals $2.80, then she adds $0.70 profit to each box and sells it for $3.50.

Do you think this is a good pricing strategy? How would it compare to marking up by a percentage of the cost?

1. What is the markup percent for a box of ginger tea?

**Markup% = Markup/unit cost = 0.70/2.80 = 0.25 = 25%**

2. If the rice-filled heating pads sell for $7.00, $10.00, and $15.00 for small, medium, and large, respectively, what is the markup percent on each one?

Markup Small: 7.00 - 5.00 = 2.00 **2.00/5.00 = 40%**

Markup Medium: 10.00 - 8.00 = 2.00 **2.00/8.00 = 25%**

Markup Large: 15.00 - 12.00 = 3.00 **3.00/12.00 = 25%**

3. Karen wants to compare using the cost plus method to the percent markup method. If she sells 2 small rice pads, 4 medium rice pads, 2 large rice pads, and 20 boxes of $3.50 tea in a month, how much profit does she accumulate? What markup percent based on cost would she have to use to make the same amount of profit on this month’s sales?

Small: $2 x 2 = $4 Profit $5 x 2 = $10 Unit Cost

Medium: $2 x 4 = $8 Profit $8 x 4 = $32 Unit Cost

Large: $3 x 2 = $6 Profit $12 x 2 = $24 Unit Cost

20 Boxes Unit Cost = $2.80 x 20 = $56 Profit 0.70 x 20 = $14

Total Profit = $4 + $8 + $6 + $14 = $32

Total Unit Cost = $10 + $32 + $24 + $56 = $122

**Total Markup = $32/$122 = 0.262295082 = 26%**

4. What prices should Karen charge (using the markup percent) to obtain the same amount of profit as she did with the cost plus method? Do not include shipping.

Selling price = cost + (cost \* markup)

Small rice pads: $5 + ($5 x 26%) = $6.30

Medium rice pads: $8 + ($8 x 26%) = $10.08

Large rice pads: $12 + ($12 x 26%) = $15.12

Boxes of tea: $2.59 + ($2.59 x 26%) = $3.26