CASE 2B – MENDEL PAPER COMPANY

Mendel Paper Company produces four basic paper product lines at one of its plants: computer paper, napkins, place mats, and poster board. Materials and operations vary according to the line of product. The market has been relatively good. The demand for napkins and place mats has increased with more people eating out, and the demand for the other lines has been growing steadily.

The plant superintendent, Marlene Herbert, while pleased with the prospects for increased sales, is concerned about costs:

> "We hear talk about a paperless office, but I haven't seen it yet. The computers, if anything, have increased the market for paper. Our big problem now is the high fixed cost of production. As we have automated our operation, we have experienced increases in fixed overhead and even variable overhead. And, we will have to add more equipment since it appears that we need even more plant capacity. We are operating over our normal capacity as it is.
>
> The place mat market concerns me. We may have to discontinue printing the mats. Our specialty printing is driving up the variable overhead to the point where we may not find it profitable to continue with that line at all."

Cost and price data for the next fiscal quarter are as follows:

	Computer Paper	**Napkins**	**Place mats**	**Poster board**
Estimated sales volume in units	30,000	120,000	45,000	80,000
Selling prices……………………	$14.00	$7.00	$12.00	$8.50
Material costs…………………	6.00	4.50	3.60	2.50

Variable overhead includes the cost of hourly labor and the variable cost of equipment operation. The fixed plant overhead is estimated at $420,000 for the quarter. Direct labor, to a large extent, is salaried; the cost is included as a part of fixed plant overhead. The superintendent's concern about the eventual need for more capacity is based on increases in production that may reach and exceed the practical capacity of 60,000 machine hours.

In addition to the fixed plant overhead, the plant incurs fixed selling and administrative expenses per quarter of $118,000.

"I share your concern about increasing fixed costs," the supervisor of plant operations replies. "We are still operating with about the same number of people we had when we didn't have this sophisticated equipment. In reviewing our needs and costs, it appears to me that we could cut fixed plant overhead to $378,000 a quarter without doing any violence to our operation. This would be a big help."

"You may be right," Herbert responds. "We forget that we have more productive power than we once had, and we may as well take advantage of it. Suppose we get some hard figures that show where the cost reductions will be made."

Data with respect to production per machine hour and the variable cost per hour of producing each of the products are given as follows:

	Computer Paper	Napkins	Place mats	Poster board
Units per hour	6	10	5	4
Variable overhead per hour	$9.00	$6.00	$12.00	$8.00

"I hate to spoil things," the vice-president of purchasing announces. "But the cost of our materials for computer stock is now up to $7. Just got a call about that this morning. Also, place mat materials will be up to $4 a unit."

"On the bright side," the vice-president of sales reports, "we have firm orders for 35,000 cartons of computer paper, not 30,000 as we originally figured."

Questions:

1. From all original estimates given, prepare estimated contribution margins by product line for the next fiscal quarter. Also, show the contribution margins per unit.
2. Prepare contribution margins as in part (1) with all revisions included.
3. For the original estimates, compute each of the following:
    a. Break-even point for the given sales mix.
    b. Margin of safety for the estimated sales volume.
4. For the revised estimates, compute each of the following:
    a. Break-even point for the given sales mix.
    b. Margin of safety for the estimated sales volume.
5. Comment on Herbert's concern about the variable cost of the place mats.