1. Based on the 2004 statement of profit and loss data (Exhibits 1 and 2), do you agree with Waters’s decision to keep product 103?

Step 1. Find break-even-point (BEP).

BEP =(total fixed costs/contribution per unit) \* Quoted Sales Price

BEP 103 = (14,137/12.05)\*27.5

= $32,262.86

Step 2.

Contribution per unit = 12.05

BEP in units = TFC / Contribution per unit

= 14,137/12.05

= 1,173.2 units need to be sold to break even

Units actually sold = 986,974

I see no issue with Waters’s decision to keep product 103 because they are selling much higher than the break-even point. Therefore, I would agree to keep product 103.

1. In order to decide whether to lower the price, the profit structure by different prices and volumes must be calculated. Fixed Cost remains the same. It is the sales volume multiplied by FC of product 101.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Price | Volume | Discount | VC | CM | FC | Op.Income |
| No price discount | $24.5 | 750,000 | 22.23 | 10.48 | 13.76 | 1,232,117 | -2,004,627 |
| Price discounted | $22.5 | 1,000,000 | 22.25 | 10.48 | 11.78 | 1,232,117 | -544,177 |
|  | $21 | 1,187,500 | 20.77 | 10.48 | 10.29 | 1,232,117 | -98,002 |
|  | $20.5 | 1,250,000 |  | 10.48 | 9.79 | 1,232,117 | -72,927 |
|  | $20 | 1,312,500 |  | 10.48 | 9.3 | 1,232,117 | -109,677 |

From this chart, it is found that the operating income increases while the price decreases. Even though the operating profit is negative, the volume increased by price decrease could still compensate for the loss from production…. Therefore, Superior Company should lower the price.

To find the best price…..

1. Assume that there is a linear relationship between the number of sales and the price change.
2. Operating income decreases until the price drops to $20.50
3. Thus the best price must be between $20.50 and $21 ($20.5<price<$21)

The best price must be between $20.50 and $21.