[redacted]

**189389: 2017SU Managerial Accounting [redacted] / 2016 Waterways Continuing Problem 19**

# Waterways Continuing Problem 19

Vice President for Sales and Marketing Sam Totter is trying to plan for the coming year in terms of production needs to meet the sales demand. He is also trying to determine ways in which the company's profits might be increased in the coming year.

Waterways markets a simple water control and timer that it mass-produces. During 2016, the company sold 696,000 units at an average selling price of per solution $4.20 per unit. The variable expenses were $1,900,080, and the fixed expenses were $683,256.

What is the product's contribution margin ratio? ***(Round ratio to 0 decimal places, e.g. 25%.)***

Contribution margin ratio [ ] %

What is the company's break-even point in units and in dollars for this product?

Break-even point in units [ ] units

Break-even point in dollars $[ ]

What is the margin of safety, both in dollars and as a ratio? ***(Round ratio to 0 decimal places, e.g. 25%.)***

Margin of safety in dollars $[ ]

Margin of safety ratio [ ] %

If management wanted to increase its income from this product by 10%, how many additional units would have to be sold to reach this income level?

Waterways would have to sell an additional [ ] units

If sales increase by 51,000 units and the cost behaviors do not change, how much will income increase on this product?

Income will increase by $[ ]

Waterways is thinking of mass-producing one of its special-order sprinklers. To do so would increase variable costs for all sprinklers by an average of $0.70 per unit. The company also estimates that this change could increase the overall number of sprinklers sold by 10%, and the average sales price would increase $0.20 per unit. Waterways currently sells 491,740 sprinkler units at an average selling price of $26.50. The manufacturing costs are $6,863,512 variable and $2,050,140 fixed. Selling and administrative costs are $2,651,657 variable and $794,950 fixed.

If Waterways begins mass-producing its special-order sprinklers, how would this affect the company? ***(Round ratio to 0 decimal places, e.g. 5% and Net income to 2 decimal places, e.g. 2,520.25.)***

| | Current | New | Effect |
|---|---|---|---|
| Contribution margin ratio | [ ] % | [ ] % | [ ] by [ ] % |
| Net income | $[ ] | $[ ] | [ ] by $[ ] |

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If the average sales price per sprinkler unit did not increase when the company began mass-producing the special-order sprinkler, what would be the effect on the company? ***(Round answers to 0 decimal places, e.g. 5% or 2,520.25.)***

Contribution margin ratio [ ] by [ ] %

Profit [ ] by $[ ]

**Question Attempts: 0 of 1 used**