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| Barker Company has a single product called a Zet. The company normally produces and sells 84,000 Zets each year at a selling price of $48 per unit. The company’s unit costs at this level of activity are given below: |

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| --- | --- | --- | --- |
|  |  |  |  |
| Direct materials | $ | 7.50 |  |
| Direct labor |  | 10.00 |  |
| Variable manufacturing overhead |  | 3.80 |  |
| Fixed manufacturing overhead |  | 8.00 | ($672,000 total) |
| Variable selling expenses |  | 3.70 |  |
| Fixed selling expenses |  | 4.50 | ($378,000 total) |
|  |  |  |  |
| Total cost per unit | $ | 37.50 |  |
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| A number of questions relating to the production and sale of Zets are given below. Each question is independent. |

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| **Required:** | |
| **1.** | Assume that Barker Company has sufficient capacity to produce 100,800 Zets each year without any increase in fixed manufacturing overhead costs. The company could increase sales by 20% above the present 84,000 units each year if it were willing to increase the fixed selling expenses by $110,000. |

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| **a.** | Calculate the incremental net operating income **(Negative amount should be indicated with a minus sign.** **Do not round intermediate calculations.)** |

|  |  |
| --- | --- |
| Incremental net operating income | $ |

|  |  |
| --- | --- |
| **b.** | Would the increased fixed selling expenses be justified? |
|  |  |
|  | |  |  | | --- | --- | |  | Yes | |  | No | |

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| --- | --- |
| **2.** | Assume again that Barker Company has sufficient capacity to produce 100,800 Zets each year. The company has an opportunity to sell 16,800 units in an overseas market. Import duties, foreign permits, and other special costs associated with the order would total $11,760. The only selling costs that would be associated with the order would be $1.50 per unit shipping cost. Compute the per unit break-even price on this order. **(Do not round intermediate calculations. Round your answer to 2 decimal places.)** |

|  |  |
| --- | --- |
| Break-even price per unit | $ |

|  |  |
| --- | --- |
| **3.** | One of the materials used in the production of Zets is obtained from a foreign supplier. Civil unrest in the supplier’s country has caused a cutoff in material shipments that is expected to last for three months. Barker Company has enough material on hand to operate at 25% of normal levels for the three-month period. As an alternative, the company could close the plant down entirely for the three months. Closing the plant would reduce fixed manufacturing overhead costs by 30% during the three-month period and the fixed selling expenses would continue at two-thirds of their normal level. What would be the impact on profits of closing the plant for the three-month period? **(Input the amount as a positive value. Round your intermediate calculations of units produced and sold to the nearest whole number. Do not round your other intermediate calculations. Round your final answer to nearest whole number.)** |

|  |  |
| --- | --- |
| Net of closing the plant | $ |

|  |  |
| --- | --- |
| **4.** | The company has 500 Zets on hand that were produced last month and have small blemishes. Due to the blemishes, it will be impossible to sell these units at the normal price. If the company wishes to sell them through regular distribution channels, what unit cost figure is relevant for setting a minimum selling price? **(Round your answer to 2 decimal places.)** |

|  |  |
| --- | --- |
| Relevant unit cost | $ |

|  |  |
| --- | --- |
| **5.** | An outside manufacturer has offered to produce Zets and ship them directly to Barker’s customers. If Barker Company accepts this offer, the facilities that it uses to produce Zets would be idle; however, fixed manufacturing overhead costs would continue at 30%. Because the outside manufacturer would pay for all shipping costs, the variable selling expenses would be reduced by 60%. Compute the unit cost that is relevant for comparison to the price quoted by the outside manufacturer. **(Do not round intermediate calculations.** **Round your answer to 2 decimal places.)** |

|  |  |
| --- | --- |
| Total relevant unit cost | $ |