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| Climate-Control, Inc., manufactures a variety of heating and air-conditioning units. The company is currently manufacturing all of its own component parts. An outside supplier has offered to sell a thermostat to Climate-Control for $31 per unit. To evaluate this offer, Climate-Control, Inc., has gathered the following information relating to its own cost of producing the thermostat internally: |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | Per Unit |  | 14,400 Units per year |
| Direct materials | $ | 9 | $ | 129,600 |
| Direct labor |  | 11 |  | 158,400 |
| Variable manufacturing overhead |  | 2 |  | 28,800 |
| Fixed manufacturing overhead, traceable |  | 6\* |  | 86,400 |
| Fixed manufacturing overhead, common, but allocated |  | 13 |  | 187,200 |
|  |  |  |  |  |
| Total cost | $ | 41 | $ | 590,400 |
|  |  |  |  |  |
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| \*40% supervisory salaries; 60% depreciation of special equipment (no resale value). |

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| **Required:** |

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| **1a.** | Assuming that the company has no alternative use for the facilities now being used to produce the thermostat, compute the total cost of making and buying the parts. **(Round your Fixed manufacturing overhead per unit rate to nearest dollar amount. Omit the "$" sign in your response.)** |

|  |  |  |
| --- | --- | --- |
|  | Make | Buy |
| Total relevant cost (14,400 units) | $ | $ |
|  | | |

|  |  |
| --- | --- |
| **1b.** | Should the outside supplier's offer be accepted? |
|  |  |
|  | |  |  | | --- | --- | |  | Accept | |  | Reject | |

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| --- | --- |
| **2a.** | Suppose that if the thermostats were purchased, Climate-Control, Inc., could use the freed capacity to launch a new product. The segment margin of the new product would be $116,800 per year. Compute the total cost of making and buying the parts. **(Round your Fixed manufacturing overhead per unit rate to nearest dollar amount. Omit the "$" sign in your response.)** |

|  |  |  |
| --- | --- | --- |
|  | Make | Buy |
| Total relevant cost (14,400 units) | $ | $ |
|  | | |

|  |  |
| --- | --- |
| **2b.** | Should Climate-Control, Inc., accept the offer to buy the thermostats from the outside supplier for $31 each? |
|  |  |
|  | |  |  | | --- | --- | |  | Reject | |  | Accept | |