

**Dr. Carl M. Rebman Jr.**

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# MEMORANDUM

To: Mr. Milligan

From: Carl M. Rebman, Jr., Professor

Date: DATE

Subject: Response to questions

Mr. Milligan the following are the answers to the questions that you requested from our firm.

**Question One**

**Which items have markups less than 30%?**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Item No.** | **Description** | **Gross Margin Ratio** | **Markup Percentage** | **Inventory Turnover** | **Days In Inventory** |
| A00750 | 6' x 6' Cedar Garden Hut | 7.45% | 8.04% | 2.85 | 128.03 |
| A00810 | 6' x 20’ Covered Bridge | 10.78% | 12.08% | 1.79 | 204.40 |
| A01130 | Miniature Folding Trellis | 12.52% | 14.31% | 5.00 | 73.00 |
| A00620 | 12' Cedar Octagon Gazebo | 13.61% | 15.76% | 2.60 | 140.38 |
| A01140 | Milligan’s Superior Trellis | 15.00% | 17.65% | 7.00 | 52.14 |
| A00730 | 6' x 10' Cedar Garden Hut | 15.93% | 18.94% | 2.19 | 166.86 |
| A00610 | 10' Octagon Cedar Gazebo | 16.67% | 20.00% | 2.03 | 179.97 |
| A01100 | Monroe Wooden Trellis | 20.00% | 25.00% | 2.50 | 146.00 |
| A00210 | 8' x 10' Aluminum Barn | 20.00% | 25.00% | 2.69 | 135.52 |
| A00310 | 12' x 8' Double Door Aluminum Shed | 20.00% | 25.00% | 3.78 | 96.69 |

**Question Two**

**In terms of annual sales, which item has the LOWEST annual sales?**

|  |  |  |
| --- | --- | --- |
| **Item No.** | **Description** | **Annual Sales** |
| A01130 | Miniature Folding Trellis | $5,487.00 |

**Question Three
In terms of annual sales, what were Mr. Milligan’s biggest selling items last year? Identify the top five.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Item No.** | **Description** | **Unit Cost** | **Annual Sales** |
| A00410 | 8' x 10' Wood Barn | $541.33  | $563,143.00 |
| A00610 | 10' Octagon Cedar Gazebo | $2,499.99  | $431,998.56 |
| A00310 | 12' x 8' Double Door Aluminum Shed | $1,043.57  | $393,949.94 |
| A00750 | 6' x 6' Cedar Garden Hut | $879.99  | $309,003.50 |
| A00150 | 10' x 14' Aluminum Shed | $650.99  | $300,000.00 |

**Question Four/Five**

**What are the company’s total annual sales? What is the company’s gross profit?**

|  |  |
| --- | --- |
| **Annual Sales** | **Annual Gross Profit** |
|  $ 4,637,018.24  |  $ 1,187,655.01  |

**Question Six**

**Based on average unit sales, which five items had the lowest sales? Which five had the highest sales?**

**LOWEST SALES**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Item No.** | **Description** | **Average Unit Sales/Year** | **Inventory Turnover** | **Days In Inventory** |
| A00820 | 8' x 40' Covered Bridge | 2 | 1.00 | 365.00 |
| A01140 | Milligan’s Superior Trellis | 7 | 7.00 | 52.14 |
| A01100 | Monroe Wooden Trellis | 25 | 2.50 | 146.00 |
| A01110 | Majesty Copper Trellis | 35 | 2.50 | 146.00 |
| A00620 | 12' Cedar Octagon Gazebo | 39 | 2.60 | 140.38 |

**HIGHEST SALES**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Item No.** | **Description** | **Average Unit Sales/Year** | **Inventory Turnover** | **Days In Inventory** |
| A00520 | 3' x 7' Picnic Table | 850 | 11.04 | 33.06 |
| A00920 | Mailbox Planter | 845 | 3.67 | 99.35 |
| A00950 | 6' Wishing Well | 780 | 2.60 | 140.38 |
| A00910 | Wagon Planter | 702 | 2.96 | 123.23 |
| A00410 | 8' x 10' Wood Barn | 700 | 14.00 | 26.07 |

**Question Seven**

**Here is the column chart that compares the top five selling items.**

**Question Eight**

**Which items have an inventory turnover greater than 12?**

|  |  |  |
| --- | --- | --- |
| **Item No.** | **Description** | **Inventory Turnover** |
| A00410 | 8' x 10' Wood Barn | 14.00 |
| A00150 | 10' x 14' Aluminum Shed | 12.50 |

**Question Nine**

**Which items have days in inventory values greater than 150 days?**

|  |  |  |
| --- | --- | --- |
| **Item No.** | **Description** | **Days In Inventory** |
| A00930 | 4' Windmill | 499.38 |
| A00940 | 6' Windmill | 393.88 |
| A00820 | 8' x 40' Covered Bridge | 365.00 |
| A00720 | 8' x 10' Cedar Shed | 350.40 |
| A00810 | 6' x 20’ Covered Bridge | 204.40 |
| A00740 | 8' x 10' Cedar Cabana Shed | 201.29 |
| A00610 | 10' Octagon Cedar Gazebo | 179.97 |
| A00120 | 12' x 20' Aluminum Shed | 179.69 |
| A00730 | 6' x 10' Cedar Garden Hut | 166.86 |

**TEST YOUR DESIGN**

**Mr. Milligan, we have added the six items to the Inventory Analysis worksheet as per your request. Here are the answers to the information you requested.**

**TYD Question Two**

**Please refer to the attached spreadsheet to see the percentage of the company’s total annual sales the item generated.**

**TYD Question Three**

**For the gross margin per unit for each inventory item again refer to the attached spreadsheet. The following tables show which inventory item(s) have the largest gross margin per unit as well as the least gross margin per unit?**

**LARGEST**

|  |  |  |
| --- | --- | --- |
| **Item No.** | **Description** | **Gross Margin Per Unit** |
| A00820 | 8' x 40' Covered Bridge | $2,190.28  |
| A02020 | 12’ x 20’ Arbor Roof | $1,312.04  |
| A01040 | 14’ x 20’ Aluminum Carport | $1,193.15  |
| A01020 | 10’ x 20’ Aluminum Carport | $789.96  |
| A01030 | 12’ x 24’ Aluminum Carport | $688.73  |

**LEAST**

|  |  |  |
| --- | --- | --- |
| **Item No.** | **Description** | **Gross Margin Per Unit** |
| A00910 | Wagon Planter | $4.57  |
| A01130 | Miniature Folding Trellis | $6.87  |
| A00920 | Mailbox Planter | $6.97  |
| A00930 | 4' Windmill | $15.33  |
| A00940 | 6' Windmill | $22.00  |

**TYD Question Four**

**Here is a bar chart that compares the age of inventory for the trellis items.**

**TYD Question Five**

**Here is a list of the five items held the longest in inventory.**

|  |  |  |
| --- | --- | --- |
| **Item No.** | **Description** | **Days In Inventory** |
| A00930 | 4' Windmill | 499.38 |
| A00940 | 6' Windmill | 393.88 |
| A00820 | 8' x 40' Covered Bridge | 365.00 |
| A00720 | 8' x 10' Cedar Shed | 350.40 |
| A02020 | 12’ x 20’ Arbor Roof | 304.17 |

**TYD Question Six**

***Answers can vary from looking at inventory, cost of items, gross margin ratio, gross per unit, lowest annual sales, etc.***