**(Analytical procedures)** In audit planning the audit of Circuits Technology, Inc. (CTI). CTI resells, installs, and provides computer networking products (client software, gateway hardware and software, and twinax hardware) to other businesses. Figure 8.14 provides some summary information from CTI's financial statements.

***Figure 8.14.*** CTI Selected Financial Information ($000)

|  | 20x1 | 20x2 | 20x3 | 20x4 | 20x5 |
| --- | --- | --- | --- | --- | --- |
| Accounts receivable, net | $ 837 | $ 1,335 | $ 1,121 | $ 962 | $ 822 |
| Inventory | $ 1,025 | $ 1,327 | $ 1,099 | $ 1,003 | $ 1,027 |
| Accounts payable | $ 164 | $ 380 | $ 225 | $ 201 | $ 175 |
| Sales | $ 3,780 | $ 5,638 | $ 4,623 | $ 4,022 | $ 3,905 |
| Cost of sales | $ 1,812 | $ 2,691 | $ 2,399 | $ 2,095 | $ 1,859 |
| Gross margin | $ 1,968 | $ 2,947 | $ 2,224 | $ 1,927 | $ 2,046 |

Required

1. Calculate purchases, gross margin, inventory turn days, accounts receivable turn days, and accounts payable turn days for the years ended 20x2, 20x3, 20x4, 20x5.
2. Describe the trends identified by performing analytical procedures in the gross operating cycle, the net operating cycle, and gross margin.
3. If tolerable misstatement is $45,000 for inventory, develop an expectation range for inventory turn days.
4. With respect to inventory, what might these trends indicate about the potential misstatement in inventory?