1. You are managing an order processing facility where employees pick the customer orders from the warehouse, package, and deliver them to postal services. There are bar-code scanners and conveyors to facilitate finding and moving items through the facility. Deliveries to each state are grouped together as part of your deal with postal services for a lower rate. There are problems in order processing, including orders filled with wrong items, orders with right items but wrong number of some items, and finding packages being shipped to the wrong state. Prepare a cause-and-effect diagram to show causes of these problems and explain your solution for each.
2. The following data is collected at a carpet production facility to show the number of flaws per 100 yards of carpet:

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| sample # | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| flaws | 7 | 5 | 0 | 10 | 12 | 5 | 9 | 4 | 6 | 2 |

Determine a proper control chart. Use spreadsheet to calculate the upper and lower control limits for the control chart and draw it. Suppose that the next carpet sample of 100 yards has 14 flaws. What can you say about the process?