1. The data in the following table is the number of nonconformities (defects) per 1,000 meters in 22 samples of telephone cable found by the Bell source inspector at a cable manufacturing facility. (a) Create the appropriate control chart for these data. (b) From the control chart, would you conclude that the process is in statistical control? (c) If any out of control points by Western Electric runs rule 1 are observed, assume they have assignable causes and can be omitted from control limit estimates. Create a revised control chart for the reduced data. (d) What control plan would you recommend for Phase 2 future production?

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| --- | --- | --- | --- |
| Sample | Defects | Sample | Defects |
| 1 | 2 | 12 | 6 |
| 2 | 10 | 13 | 10 |
| 3 | 4 | 14 | 12 |
| 4 | 7 | 15 | 14 |
| 5 | 7 | 16 | 7 |
| 6 | 11 | 17 | 2 |
| 7 | 5 | 18 | 6 |
| 8 | 13 | 19 | 8 |
| 9 | 5 | 20 | 3 |
| 10 | 18 | 21 | 10 |
| 11 | 12 | 22 | 9 |