

Check Sheet

Problem

How to capture data for analysis?

Difficulty

Easy to use

1. A **Check Sheet** is the simplest quality tool.
2. A check sheet is an organized way to capture information.
3. The information captured can be quantitative or qualitative. When quantitative, a check sheet is called a *tally sheet*.
4. Each type of check sheet has a different purpose, such as:
 - A. Counting number of defects
 - B. Determining defect locations
 - C. Determining how defective something is.

- Existing process
- Team

Check Sheet Process

- Check Sheet
- Data for analysis

1. Define the data needed to address a specific issue.
2. Choose an appropriate check sheet style, such as
 - A. Obtaining the distribution of a specific item
 - B. Counting the number of defective items
 - C. Identifying where defects occur
3. Create the check sheet.
4. Train the team on how to use the check sheet.
 - Test the team and the check sheet to ensure the data captured is correct and useful.
5. Determine how, when, and where to collect data.
6. Collect the data.

| Problem | Mon | Tue | Wed | Thu | Fri |
|-------------------|-----|-----|-----|-----|-----|
| Timeliness | I | | III | | |
| Quality | | II | III | | II |
| Quantity | I | | | I | |
| ... | | | | | |

Check Sheet – Several Examples

Obtaining the distribution of an item

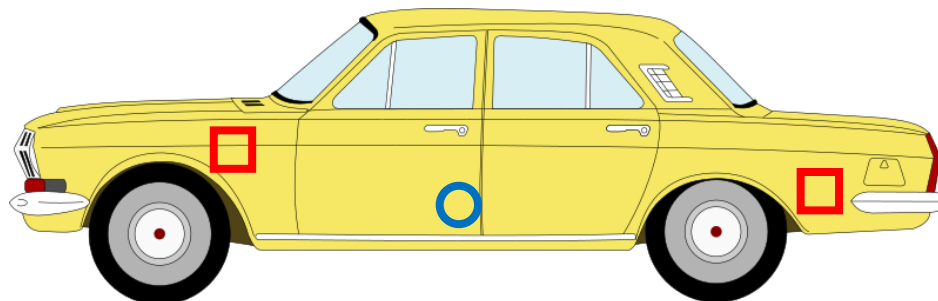
| Date | 6/1/2023 | | | | | | | | | | | | | | | | | | | | |
|--------------------------|---------------------|--------------|---|---|---|---|---|---|---|---|---|---|---|--|--|--|--|--|--|--|--|
| Product | widget #1 | | | | | | | | | | | | | | | | | | | | |
| Inspector | Bob | | | | | | | | | | | | | | | | | | | | |
| Batch | A23 | | | | | | | | | | | | | | | | | | | | |
| Specified weight (grams) | Measured difference | Observations | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
| 139 | < -5 | x | x | x | x | x | x | | | | | | | | | | | | | | |
| | (-3, -5] | x | x | x | x | x | x | x | x | x | | | | | | | | | | | |
| | [-0.1, -3] | x | x | x | x | x | x | x | x | x | x | x | | | | | | | | | |
| | 0 | x | x | x | x | x | x | x | x | x | x | x | x | | | | | | | | |
| | [0.1, 3] | x | x | x | x | x | x | | | | | | | | | | | | | | |
| | (3, 5] | x | x | x | x | | | | | | | | | | | | | | | | |
| | > 5 | x | x | x | | | | | | | | | | | | | | | | | |

Counting defective items

| Date | 6/1/2023 | | | | | | | |
|---------|-----------|----------|------------------|---------|-----------|----------|--------|--|
| Product | widget #2 | | | | | | | |
| Batch | B34 | | | | | | | |
| Shift | Machine | Operator | Defects observed | | | | | |
| | | | Monday | Tuesday | Wednesday | Thursday | Friday | |
| 1 | A | Alan | | | | | | |
| | | Betty | | | | | | |
| | B | Carol | | | | | | |
| | | Dan | | | | | | |
| 2 | A | Eric | | | | | | |
| | | Frank | | | | | | |
| | B | George | | | | | | |
| | | Harry | | | | | | |

Defect location

| Date | 6/1/2023 | |
|-----------|-----------------|-------|
| Inspector | Charles | |
| Vehicle | stock #8347 | |
| Icon | Defect type | Count |
| □ | dent | |
| ○ | scratched paint | |



Check Sheet – Notes

Slide 1

1. Each check sheet is designed to meet a specific need; there is no standard format.
2. A check sheet is not a checklist.
3. Check sheets are used to either gather data for subsequent analysis, or to support conclusions already obtained.
4. A well-defined check sheet reduces the chance that different people will collect data in different ways.
5. Potential failure modes of check sheets:
 - A. Making the check sheet too complicated
 - B. Not allowing operators enough time to capture all relevant information.
 - C. Not piloting or testing the check sheet before large scale deployment.
 - D. Obtaining data that will not be used.
 - E. Poor definitions of how to obtain data, resulting in missed or noisy data.
6. A Check Sheet is one of the “7 Basic Quality Tools”: Check sheet, Control chart, Divide and Conquer, Fishbone diagram, Histogram, Pareto chart, Scatter diagram.

Slide 2

1. The examples show the three major types of check sheets.
2. Top left – distribution – this data is ready to be made into a histogram.
3. Top right – counts – this data is ready to be used in a Pareto analysis.