

| Sample Data from a Class Experiment | | | | | | | | | | | | | | | |
|-------------------------------------|--|----------------|-----|---------|----------------|------|----------|----------------|------|----------|----------------|-----|---------|----------------|------|
| Researcher | Time (in seconds) for Disc to Rise in each Dilution of Hydrogen Peroxide (drops peroxide to drops water) | | | | | | | | | | | | | | |
| | 100 | | | 80 | | | 60 | | | 40 | | | 20 | | |
| | 40 to 0 | | | 32 to 8 | | | 24 to 16 | | | 16 to 24 | | | 8 to 32 | | |
| | D | s ² | | D | s ² | | D | s ² | | D | s ² | | D | s ² | |
| Charisma | 13 | 6 | 36 | 8 | 0 | 0 | 8 | -2 | 4 | 6 | -7 | 49 | 9 | -9 | 81 |
| | 9 | 2 | 4 | 15 | 7 | 49 | 18 | 5 | 25 | 21 | 8 | 64 | 30 | 12 | 144 |
| Matthew | 3 | -4 | 16 | 4 | -4 | 16 | 9 | -4 | 16 | 13 | 0 | 0 | 19 | 1 | 1 |
| | 3 | -4 | 16 | 6 | -2 | 4 | 7 | -6 | 36 | 12 | -1 | 1 | 17 | -1 | 1 |
| Joya | 5 | -2 | 4 | 10 | 2 | 4 | 7 | -6 | 36 | 9 | -4 | 16 | 20 | 2 | 4 |
| | 5 | -2 | 4 | 8 | 0 | 0 | 11 | -2 | 4 | 8 | -5 | 25 | 11 | -7 | 49 |
| Dadly | 30 | 23 | 529 | 52 | 44 | 1936 | 12 | -1 | 1 | 32 | 19 | 361 | 80 | 62 | 3844 |
| | 22 | 15 | 225 | 13 | 5 | 25 | 18 | 5 | 25 | 27 | 14 | 196 | 37 | 19 | 361 |
| Cammy | 8 | 1 | 1 | 5 | -3 | 9 | 8 | -5 | 25 | 10 | -3 | 9 | 19 | 1 | 1 |
| | 5 | -2 | 4 | 5 | -3 | 9 | 8 | -5 | 25 | 10 | -3 | 9 | 12 | -6 | 36 |
| Ramon | 2 | -5 | 25 | 1 | -7 | 49 | 4 | -9 | 81 | 5 | -8 | 64 | 7 | -11 | 121 |
| | 4 | -3 | 9 | 4 | -4 | 16 | 5 | -8 | 64 | 6 | -7 | 49 | 9 | -9 | 81 |
| Elisabeth | 12 | 5 | 25 | 15 | 7 | 49 | 17 | 4 | 16 | 13 | 0 | 0 | 8 | -10 | 100 |
| | 12 | 5 | 25 | 10 | 2 | 4 | 10 | -3 | 9 | 12 | -1 | 1 | 21 | 3 | 9 |
| Michelle | 5 | -2 | 4 | 10 | 2 | 4 | 14 | 1 | 1 | 15 | 2 | 4 | 22 | 4 | 16 |
| | 9 | 2 | 4 | 5 | -3 | 9 | 5 | -8 | 64 | 10 | -3 | 9 | 12 | -6 | 36 |
| | 4 | -3 | 9 | 9 | 1 | 1 | 8 | -5 | 25 | 12 | -1 | 1 | 22 | 4 | 16 |
| Becca | 3 | -4 | 16 | 5 | -3 | 9 | 6 | -7 | 49 | 8 | -5 | 25 | 12 | -6 | 36 |
| | 4 | -3 | 9 | 5 | -3 | 9 | 6 | -7 | 49 | 6 | -7 | 49 | 16 | -2 | 4 |
| Kristin | 5 | -2 | 4 | 7 | -1 | 1 | 5 | -8 | 64 | 7 | -6 | 36 | 10 | -8 | 64 |
| | 3 | -4 | 16 | 7 | -1 | 1 | 4 | -9 | 81 | 5 | -8 | 64 | 19 | 1 | 1 |
| Janae | 5 | -2 | 4 | 4 | -4 | 16 | 3 | -10 | 100 | 7 | -6 | 36 | 12 | -6 | 36 |
| | 3 | -4 | 16 | 4 | -4 | 16 | 4 | -9 | 81 | 8 | -5 | 25 | 10 | -8 | 64 |
| Rachel J. | 4 | -3 | 9 | 4 | -4 | 16 | 8 | -5 | 25 | 12 | -1 | 1 | 15 | -3 | 9 |
| | 3 | -4 | 16 | 4 | -4 | 16 | 9 | -4 | 16 | 18 | 5 | 25 | 15 | -3 | 9 |
| Amanda | 9 | 2 | 4 | 9 | 1 | 1 | 10 | -3 | 9 | 15 | 2 | 4 | 23 | 5 | 25 |
| | 7 | 0 | 0 | 10 | 2 | 4 | 11 | -2 | 4 | 11 | -2 | 4 | 25 | 7 | 49 |
| Constan ce | 5 | -2 | 4 | 7 | -1 | 1 | 3 | -10 | 100 | 4 | -9 | 81 | 5 | -13 | 169 |
| | 5 | -2 | 4 | 4 | -4 | 16 | 3 | -10 | 100 | 10 | -3 | 9 | 11 | -7 | 49 |
| Rachel L. | 7 | 0 | 0 | 7 | -1 | 1 | 13 | 0 | 0 | 10 | -3 | 9 | 14 | -4 | 16 |
| | 5 | -2 | 4 | 5 | -3 | 9 | 8 | -5 | 25 | 11 | -2 | 4 | 12 | -6 | 36 |
| Ben | 14 | 7 | 49 | 16 | 8 | 64 | 32 | 19 | 361 | 43 | 30 | 900 | 16 | -2 | 4 |
| | 23 | 16 | 256 | 12 | 4 | 16 | 50 | 37 | 1369 | 35 | 22 | 484 | 10 | -8 | 64 |
| Jaclyn | 3 | -4 | 16 | 4 | -4 | 16 | 5 | -8 | 64 | 6 | -7 | 49 | 7 | -11 | 121 |
| | 4 | -3 | 9 | 6 | -2 | 4 | 5 | -8 | 64 | 6 | -7 | 49 | 9 | -9 | 81 |
| Amanda O. | 7 | 0 | 0 | 8 | 0 | 0 | 6 | -7 | 49 | 14 | 1 | 1 | 14 | -4 | 16 |
| | 10 | 3 | 9 | 4 | -4 | 16 | 5 | -8 | 64 | 9 | -4 | 16 | 7 | -11 | 121 |
| | | | | | | | | | | | | | | | |
| Sherese | 5 | -2 | 4 | 2 | -6 | 36 | 2 | -11 | 121 | 13 | 0 | 0 | 8 | -10 | 100 |
| | 2 | -5 | 25 | 4 | -4 | 16 | 3 | -10 | 100 | 12 | -1 | 1 | 6 | -12 | 144 |
| Michael | 8 | 1 | 1 | 7 | -1 | 1 | 16 | 3 | 9 | 16 | 3 | 9 | 20 | 2 | 4 |

| | | | | | | | | | | | | | | | |
|----------|----|----|-----|----|----|-----|----|----|-----|----|----|-----|----|----|-----|
| | 6 | -1 | 1 | 10 | 2 | 4 | 13 | 0 | 0 | 13 | 0 | 0 | 22 | 4 | 16 |
| Aaron | 10 | 3 | 9 | 8 | 0 | 0 | 13 | 0 | 0 | 14 | 1 | 1 | 20 | 2 | 4 |
| | 5 | -2 | 4 | 9 | 1 | 1 | 12 | -1 | 1 | 13 | 0 | 0 | 23 | 5 | 25 |
| Sara | 5 | -2 | 4 | 6 | -2 | 4 | 7 | -6 | 36 | 10 | -3 | 9 | 15 | -3 | 9 |
| | 3 | -4 | 16 | 7 | -1 | 1 | 8 | -5 | 25 | 9 | -4 | 16 | 15 | -3 | 9 |
| Kendrick | 5 | -2 | 4 | 10 | 2 | 4 | 9 | -4 | 16 | 20 | 7 | 49 | 36 | 18 | 324 |
| | 7 | 0 | 0 | 12 | 4 | 16 | 9 | -4 | 16 | 14 | 1 | 1 | 42 | 24 | 576 |
| David | 10 | 3 | 9 | 9 | 1 | 1 | 13 | 0 | 0 | 15 | 2 | 4 | 26 | 8 | 64 |
| | 18 | 11 | 121 | 22 | 14 | 196 | 24 | 11 | 121 | 37 | 24 | 576 | 32 | 14 | 196 |
| Heather | 4 | -3 | 9 | 4 | -4 | 16 | 8 | -5 | 25 | 12 | -1 | 1 | 15 | -3 | 9 |
| | 3 | -4 | 16 | 4 | -4 | 16 | 9 | -4 | 16 | 18 | 5 | 25 | 15 | -3 | 9 |
| Sara | 7 | 0 | 0 | 13 | 5 | 25 | 11 | -2 | 4 | 15 | 2 | 4 | 10 | -8 | 64 |
| | 3 | -4 | 16 | 7 | -1 | 1 | 8 | -5 | 25 | 10 | -3 | 9 | 10 | -8 | 64 |

Summary of Class Data

| | | | | | | | | | | | | | | | |
|----------------|-----------|----|----|----|----|--|--|--|--|--|--|--|--|--|--|
| % H2O2 | 100 | | | 80 | | | | | | | | | | | |
| Mean | 7 | | | 8 | | | | | | | | | | | |
| Variance | 31 | | | 53 | | | | | | | | | | | |
| SD | 6 | | | 7 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| % H2O2 | 100 | 80 | 60 | 40 | 20 | | | | | | | | | | |
| Mean | 7 | 8 | 10 | 13 | 18 | | | | | | | | | | |
| disc rise time | (seconds) | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
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