

ClockWork — Labor, Sound, Time

Collect Data

1. Find a consumer product on the Consumer Price Index site in the Database of Average Price Data, download the spreadsheet, and open it. Top picks will suffice if you're not feeling creative: www.bls.gov/cpi/data.htm
2. Find a profession on the Bureau of Labor Statistics site in "Wage Data by Area and Occupation" and write the name and hourly wage on your spreadsheet below all the other data: www.bls.gov/bls/blswage.htm

Adjust Data

1. Pick a twelve-month period and create a new row labeled "Hours of labor" under where you wrote the name and hourly wage. Put in a formula is to divide each cost cell with the hourly wage, e.g. $=B17/\$B\23
2. In the next row down, write "Minimum" and put a formula next to it that calculates the minimum amount of time, e.g. $=MIN(B24:M24)$
3. Below that, write "Maximum" and put a formula next to it that calculates the maximum amount of time, e.g. $MAX(B24:M24)$
4. Further down, write "Range" and put a formula next to it that calculates the range of values by subtracting the minimum from the maximum, e.g. $B25-B26$
5. Next, write "Scaled to 38-96" in the cell below and put in the formula that subtracts the minimum from the cell, multiplies by 58 (96-38), divides that by the "Range" above, and adds 38, e.g. $=(B24 - \$B\$26)*(96 - 38)/\$B\$27 + 38$
6. Another row, write "Rounded 38 - 96 Scale" and put a formula in that rounds the values about to the nearest whole number, e.g. $=ROUND(B28,0)$
7. Below, write "Scaled to 0.2 to 3" and put a formula in that subtracts the minimum from the cell, multiples by 2.8, divides that by the "Range" above, and adds 0.2, e.g. $=(B24-\$B\$26)*2.8/\$B\$27 + 0.2$
8. Lastly, write "Rounded number of hours" and put a formula in that that rounds the number of hours for each month, e.g. $=ROUND(B24,0)$

Play Data

1. Open ClockWork.scd in SuperCollider and execute the lines until you get to `// play the wage-pitch synth.`
2. Replace the numbers below the line `//use the values of "Rounded 38-96 scale" here` with the values from the spreadsheet in "Rounded 38-96 scale."
3. Replace the numbers below the line `//use the values of "Scaled to 0.2 to 3" here` with the values from the spreadsheet in "Scaled to 0.2 to 3."
4. Play the wage-pitch synth.
5. In the beep-count synth, put a number from your list of "Rounded number of hours" into the first `Synth` after the `\repeat`. Ask your neighbor for one of their values to put in the second `Synth` after that `\repeat`
6. Play the beep-count synth.

Compare with Friends and Ask Questions

1. How do different salaries for the same products sound?
2. What do you think the sound of the price of a product over a year means?
3. Can you hear patterns that you wouldn't have noticed in the numbers?