

## Tipshare Instructions

The **TipShare** spreadsheet is a tool designed to distribute cash tips to employees based on their hours worked. It utilizes Excel's functions and cell referencing to calculate and allocate cash tips in a swift and precise way. This instruction file outlines how to use the spreadsheet.

### HOW TO USE

**Step 1:** Enter each employee's `Hours Worked` from Timeclock.

**Step 2:** Enter the `Total Cash Tips` collected from Tip Jar.

**Step 3:** Distribute the amounts shown in the `Cash Tips` Column to each employee.

**BLUE** Cells are for user input, specifically `Hours Worked` and `Total Cash Tips`.

**GREEN** Cells are calculated fields based on user input, specifically `Team Total Hours` and `Cash Tips`.

### TIPSHARE FORMULA

$$\frac{\text{Employee Hours Worked}}{\text{Team Total Hours}} \times \text{Total Cash Tips} = \text{Employee Cash Tips}$$

### HOW IT WORKS

The **TipShare** Excel spreadsheet uses the SUM function and cell referencing to calculate the total cash tips for each employee. The SUM function adds the hours for each employee and displays a cumulative total. Cell referencing is the ability of the value in one cell to be referenced in another cell, enabling chaining of functions. Excel was chosen for maximum compatibility across many systems.

The Tipshare Formula is applied to cell range C2:C9 in the `Cash Tips` Column. Each employee's `Total Hours Worked` for that week, located in cell range B2:B9, is divided by the `Team Total Hours` in cell B11. The intermediate result is multiplied by the `Total Cash Tips` for the week in cell C11. Each employee's `Cash Tips` are displayed in cell range C2:C9.

The `TipShare.xlsx` file has Worksheet Protection applied to `Team Total Hours` and `Cash Tips` to prevent breaking or overwriting the formulae. Worksheet Protection can be overridden at any time. The password is `password`.

### SPEED AND ACCURACY ADVANTAGES

Our tests revealed the manual calculation method takes 4 minutes and 135 button taps to transfer the hours worked from the time clock software and using a pencil, paper, and calculator to compute the tips for an 8-person team. Those button taps introduce a lot of opportunities for errors and it is best to minimize them.

Using the **TipShare** spreadsheet for tip share calculations, the time to complete the task dropped to 53 seconds and 42 button taps. Calculations reveal a time savings improvement is approximately 77.92% and a button tapping improvement of 68.89%. This means that using the spreadsheet is significantly faster and more efficient, **saving you nearly 78% of the time required and 69% of the button taps** over the manual calculation process.