

# Tip & Bill Split Calculation Menu

This tool implements a simple way to manage the “Bill-Tip-Split” problem. To show it, touch the “**OPT**” menu and in the section “5) Business”, touch the “**Tip & Bill Split**” button.

Tip & Bill Split Calculation

<b>Bill (\$)</b> +576.25	<b>N° Heads</b> 11
<b>TIP (%)</b> +14.53%	<b>TIP (\$)</b> +83.75
<b>Total (\$)</b> +660.00	<b>Split (\$/head)</b> +60.00

To perform the calculations, two parameters and one variable must be entered. The parameters are the Bill amount “**Bill(\$)**” and the number of persons that share the bill “**N° Heads**”. The variable could be any of the blue buttons.

Each time a number is entered into a parameter or variable, the calculation of all the others are performed automatically.

Button	Performed Actions
[ <b>Bill (\$)</b> ]	Stores the Bill amount and calculates : $\mathbf{TIP(\$) = Bill(\$) \cdot ( TIP(\%) \div 100)}$ $\mathbf{Total(\$) = Bill(\$) + TIP(\$)}$ $\mathbf{Split(\$) = Total(\$) \div Split(\$ / Head)}$
[ <b>N°Heads</b> ]	Stores the number of persons and calculates : $\mathbf{Split(\$) = Total(\$) \div Split(\$ / Head)}$

Button	Performed Actions
Type a number and touch <b>[TIP(%)]</b>	Stores the tip percentage and calculates : $\text{TIP}(\$) = \text{Bill}(\$) \cdot (\text{TIP}(\%) \div 100)$ $\text{Total}(\$) = \text{Bill}(\$) + \text{TIP}(\$)$ $\text{Split}(\$) = \text{Total}(\$) \div \text{Split}(\$/\text{Head})$
Type a number and touch <b>[TIP(\$)]</b>	Stores the tip amount and calculates : $\text{TIP}(\%) = 100 \cdot (\text{TIP}(\$) \div \text{Bill}(\$) )$ $\text{Total}(\$) = \text{Bill}(\$) + \text{TIP}(\$)$ $\text{Split}(\$) = \text{Total}(\$) \div \text{Split}(\$/\text{Head})$
Type a number and touch <b>[Total(\$)]</b>	Stores the total to be paid and calculates : $\text{TIP}(\$) = \text{Total}(\$) - \text{Bill}(\$)$ $\text{TIP}(\%) = 100 \cdot (\text{TIP}(\$) \div \text{Bill}(\$) )$ $\text{Split}(\$) = \text{Total}(\$) \div \text{Split}(\$/\text{Head})$
Type a number and touch <b>[Split(\$/Head)]</b>	Stores the each person amount to pay and calculates: $\text{Total}(\$) = \text{N}^\circ \text{Persons} \cdot \text{Split}(\$/\text{Head})$ $\text{TIP}(\$) = \text{Total}(\$) - \text{Bill}(\$)$ $\text{TIP}(\%) = 100 \cdot (\text{TIP}(\$) \div \text{Bill}(\$) )$

### **Example:**

A dinner Bill is \$576.25 and 11 persons will share it. What is the amount per person if all agree to add a 15% tip?.

### **Solution:**

Keystrokes	Description
576.25 <b>[Bill(\$)]</b>	Stores the Bill amount.
11 <b>[N° Heads]</b>	Enter the number of persons.
15 <b>[TIP(%)]</b>	Stores the tip percentaje.
<b>[TIP(\$)]</b>	Show the tip amount. <b>Tip Amount = \$86.44</b>

Keystrokes	Description
<b>[Total(\$)]</b>	Shows the total amount. <b>Total Amount = \$662.69</b>
<b>[Split(\$/Head)]</b>	Shows the amount to pay per person. <b>Total / Person = \$60.24</b>

Suppose no one wants to pay the exact amount and the split is rounded to \$60.00. What is the Tip% and the new Total ?

Keystrokes	Description
Type 60 <b>[Split(\$/Head)]</b>	Stores the rounded amount per person.
<b>[Total(\$)]</b>	Shows the new Total. <b>Total Amount = 660.00</b>
<b>[TIP(\$)]</b>	Shows the tip amount. <b>Tip Amount = \$83.75</b>
<b>[TIP(%)]</b>	Shows the new Tip percent. <b>TIP (%) = 14.53</b>