**Summary:**

**Relative, absolute, and mixed references**

* Absolute referencing is marked by a dollar sign ($). For example, =$A$10 has absolute referencing for both the column and the row value
* Relative references (which is what you normally do e.g. “=A10”) will change anytime the formula is copied and pasted. They are in relation to where the referenced cell is located. For example if you copied “=A10” to the cell to the right it would become “=B10”. With absolute referencing “=$A$10” copied to the cell to the right would remain “=$A$10”. But if you copied $A10 to the cell below, it would change to $A11 because the row value isn't an absolute reference.
* Relative references (cells referenced without a dollar sign, like A2) will change when you copy and paste the function into a different cell. With relative references, the location of the cell that contains the function determines the cells used by the function.
* Absolute references (cells fully referenced with a dollar sign, like $A$2) will not change when you copy and paste the function into a different cell. With absolute references, the cells referenced always remain the same.
* Mixed references (cells partially referenced with a dollar sign, like $A2 or A$2) will change when you copy and paste the function into a different cell. With mixed references, the location of the cell that contains the function determines the cells used by the function, but only the row or column is relative (not both).
* In spreadsheets, you can press the F4 key to toggle between relative, absolute, and mixed references in a function. Click the cell containing the function, highlight the referenced cells in the formula bar, and then press F4 to toggle between and select relative, absolute, or mixed referencing.

### **Data ranges**

* When you click a cell that contains a function, colored data ranges in the formula bar indicate which cells are being used in the spreadsheet. There are different colors for each unique range in a function.
* Colored data ranges help prevent you from getting lost in complex functions.
* In spreadsheets, you can press the F2 key to highlight the range of data used by a function. Click the cell containing the function, highlight the range of data used by the function in the formula bar, and then press F2. The spreadsheet will go to and highlight the cells specified by the range.

**=TEXT(value, format)**

**The** value **argument is the value that you want to convert to text. This can be a number, a date, or a reference to a cell containing a number or a date.**

**The** format **argument is the number format that you want to use to format the** value**. This can be a built-in number format, or a custom number format that you create using codes to specify the number format.**

**For example, the formula** =TEXT(A1, "0.00") **will convert the value in cell A1 to text, and display it with two decimal places.**

**Display a date in a specific format:**

=TEXT(A1, "mm/dd/yyyy") **will display the date in cell A1 in the format "mm/dd/yyyy", where "mm" represents the month, "dd" represents the day, and "yyyy" represents the year.**

=TEXT(A1, "dddd, mmmm d, yyyy") **will display the date in cell A1 in the format "dddd, mmmm d, yyyy", where "dddd" represents the full name of the day, "mmmm" represents the full name of the month, "d" represents the day as a number, and "yyyy" represents the year.**