Connie Lance

connie.lance@aims.edu

Excel training - advanced

Vestas Windsor

Aims Community College  
Center for Workforce Development   
and Innovation

# Excel Advanced

|  |  |
| --- | --- |
| **Vestas Objectives** | **Expanded Performance Objectives** |
| Advanced Formulas | Logical Functions (IF, nested IF, AND, and OR)  Statistical Functions (COUNTIF, COUNTIFS, AVERAGEIF, and AVERAGEIFS)  Math and Trig Functions (SUMIF and SUMIFS)  Lookup Functions (VLOOKUP, HLOOKUP, XLOOKUP)  Financial Functions (PMT, PPMT and IPMT) |
| Advanced Filters | Filter a worksheet using a custom AutoFilter  Filter and sort a worksheet using conditional formatting or cell attributes |
| Text to Columns | Separate data using Text to Columns |
| Importing Text Files | Import data from a text file, including a comma-separated file |
| Pivot Tables | Create, edit, and format a PivotTable  Filter a PivotTable using Slicers  Filter a PivotTable using timelines  Create and format a PivotChart |
| Goal Seek | Populate cells using Goal Seek |
| Scenarios | Add, edit, and apply a Scenario  Save and display various worksheet models using the Scenario Manager  Generate a Scenario Summary Report |
| Data Table and Consolidation | Use the Consolidate feature to summarize data from multiple worksheets in a master worksheet |
| Excel on the Web | Get external data from a Web page  Publish a worksheet as a Web page |
| VBA Macros | Automate tasks with the Macro Recorder  Record, run, and edit a macro  Save a workbook containing a macro as a macro-enabled workbook  Assign a macro to a keyboard shortcut |
| More VBA Macros | Modify the VBA in a macro  Get inputs for the macro |

# Advanced Formulas

## Logical Functions

**01If.xlsx**

If and nested IF

In an IF function, a logical condition is evaluated. If it is true, then one calculation happens. If the condition is false, another calculation happens.

=IF(logical\_test, value\_if\_true, value\_if\_false)

A nested function is one function inside of another function. Here is a nested IF function that tests more conditions.

=IF(logical\_test, value\_if\_true, IF(logical\_test, value\_if\_true, value\_if\_false))

AND and OR

AND returns True if **all** of the conditions are true

AND returns False if **any** of the conditions are false

=AND(Production > Target, Quality > 5)

True if both are true

False if Production > Target but Quality < 5

False if Production < Target but Quality > 5

False if both are false

OR returns True if **any** of the conditions are true

OR returns False if **all** of the conditions are false

=OR(Production > Target, Quality > 5)

True if both are true

True if Production > Target but Quality < 5

True if Production < Target but Quality > 5

False if both are false

## Statistical Functions

COUNTIF and COUNTIFS

**02StatFxns.xlsx**

COUNTIF will count cells within a range that meet a single criterion.

=COUNTIF(Range, Criteria)

COUNTIFS will count cells within a range that meet multiple criteria.

=COUNTIFS(Criteria\_range1, Criteria1, Criteria\_range2, Criteria2)

|  |  |
| --- | --- |
| Create a COUNTIF formula | Create a COUNTIFS formula |
| 1. Make desired cell active 2. Click Insert Function button 3. Change category to Statistical 4. Select COUNTIF 5. Click OK 6. Enter range address or range name to select by in Range text box 7. Enter condition expression or text in Criteria text box 8. Click OK | 1. Make desired cell active 2. Click Insert Function button 3. Change category to Statistical 4. Select COUNTIFS 5. Click OK 6. Enter range address or range name to select by in Criteria\_Range 1 text box 7. Enter condition expression or text in Criteria 1 text box 8. Enter range address or range name to select by in Criteria\_Range 2 text box 9. Enter condition expression or text in Criteria 2 text box 10. Continue adding criteria range expressions and criteria as needed 11. Click OK |

AVERAGEIF and AVERAGEIFS

**02StatFxns.xlsx**

AVERAGEIF will calculate the arithmetic mean of cells within a range that meet a single criterion

Notice that the average range comes last in this function.

= AVERAGEIF(Range, Criteria, Average\_range)

AVERAGEIFS will calculate the arithmetic mean of cells within a range that meet multiple criteria.

Notice that the average range comes *first* in this function.

= AVERAGEIFS(Average\_range, Criteria\_range1, Criteria1, Criteria\_range2, Criteria2)

|  |  |
| --- | --- |
| Create an AVERAGEIF formula | Create an AVERAGEIFS formula |
| 1. Make desired cell active 2. Click Insert Function button 3. Change category to Statistical 4. Select AVERAGEIF 5. Click OK 6. Enter range address or range name to select by in Range text box 7. Enter condition expression or text in Criteria text box 8. Enter range address or range name to average in Average\_range text box 9. Click OK | 1. Make desired cell active 2. Click Insert Function button 3. Change category to Statistical 4. Select AVERAGEIFS 5. Click OK 6. Enter range address or range name to average in Average\_range text box 7. Enter range address or range name to select by in Criteria\_range1 text box 8. Enter condition expression or text in Criteria1 text box 9. Enter range address or range name to select by in Criteria\_range2 text box 10. Enter condition expression or text in Criteria2 text box 11. Continue adding criteria range expressions and criteria as needed 12. Click OK |

SUMIF and SUMIFS

**02StatFxns.xlsx**

=SUMIF(range, criteria, sum\_range)

The math function SUMIF adds cells within a range based on a single criterion. Notice that the sum\_range is at the end.

=SUMIFS(sum\_range, criteria\_range1, criteria1, criteria\_range2, criteria2 . . .)

Use the SUMIFS function to add cells within a range based on multiple criteria. Notice that the sum\_range is at the beginning.

## Lookup Functions

VLOOKUP

**03Lookup.xlsx**

VLOOKUP and HLOOKUP look up data in a reference table and return in the formula cell a value from a column or row in the lookup table.

=VLOOKUP(Lookup\_value, Table\_array, Col\_index\_num, Range\_lookup)

The Range\_lookup is optional. If it is set to False, then Excel looks for an exact match.

VLOOKUP is much more common than HLOOKUP because the lookup values are usually in a vertical table.

Using INDEX and MATCH can be more specific and adaptable than the lookup functions.

=INDEX(ref, row, [col], [area])

Looks in ref and returns the value of the cell at the intersection of row, and, optionally, col

=MATCH(value, range, [match], [type])

Searches range for value and, if found, returns the relative position of value in range

The XLOOKUP function searches a range or an array, and then returns the item corresponding to the first match it finds. If no match exists, then XLOOKUP can return the closest (approximate) match.

=XLOOKUP(lookup\_value, lookup\_array, return\_array, [if\_not\_found], [match\_mode], [search\_mode])

The UNIQUE function returns a list of unique values in a list or range.

=UNIQUE(array, [by col], [exactly once])

=UNIQUE(C2:C60487, FALSE, TRUE) will show those that show up once

The Sort function can be used with Unique

=SORT(UNIQUE(C2:C60487)) Will sort the unique manufacturers

## Financial Functions

Several financial functions have different versions. The PMT function calculates payments on a loan. PPMT and IPMT calculate the principal and interest of each payment. IRR returns the internal rate of return for a series of cash flows. XIRR returns the internal rate of return for a schedule of cash flows that is not necessarily periodic. MIRR returns the internal rate of return for a series of periodic cash flows, considering both cost of investment and interest on reinvestment of cash.

**04Payment.xlsx**

# Advanced Filters

Filter a worksheet using a custom AutoFilter

1. Select range
2. Click Sort & Filter button
3. Click Filter
4. Deselect range
5. Click filter arrow at top of desired column
6. Point to Number Filters
7. Click desired filter category
8. Enter criteria at Custom AutoFilter dialog box
9. Click OK

Notice that the data is not deleted. You can tell by the row numbers that some rows are skipped. You can filter by more than one criterion.

**05Filters.xlsx**

Select A3:I20. Add filters and experiment using different filters.

Filter and sort a worksheet using conditional formatting or cell attributes

1. Select range
2. Click Sort & Filter button
3. Click Filter
4. Deselect range
5. Click filter arrow at top of desired column
6. Point to Filter by Color or Sort by Color
7. Click desired color or icon

OR

1. Rick-click cell with desired color or icon
2. Point to Filter or Sort
3. Click desire filter or sort option

**05Filters.xlsx**

Add a conditional formatting icon set to one of the fields. Filter by one of those icons.

# Text to Columns

A column containing text that you want to split can be separated into multiple columns. This is useful for names (e.g. Last, First)

Split text into multiple columns

1. Insert blank columns next to source data
2. Select data to be split
3. Click Data tab
4. Click Text to Columns button
5. Click Next at first dialog box
6. Select delimiter check box for character that separates data (usually tabs or commas)
7. Click Next
8. Click Finish
9. Deselect range

**06Text.xlsx**

Sort by Client Name. Look at how it sorts by the first name. Split the columns so that you can sort by the clients’ last names.

# Importing Text Files

A text file is often used to share data, because that file format is recognized by nearly all applications.

Text files are often delimited by tabs or commas.

Import Data from a Comma Separated Text File

1. Make a cell active to begin the import
2. Click Data tab
3. Click *From Text* button
4. Double-click .csv file name
5. Click Next
6. Click Comma check box
7. Click Next
8. Click Finish
9. Click OK

Open **07Import.xlsx** and import **08HousingData.csv**.

# Pivot Tables

**09Pivot.xlsx**

A PivotTable is an interactive table that organizes and summarizes data based on fields (column headings) and records (rows). A numeric column that you select is then grouped by the rows and columns category and the data is summarized using a function such as Sum, Average, or Count. By default, non-numeric fields are added to the Rows box and numeric fields are added to the Values box in the layout section of the pane. PivotTable data must be tabular, contiguous, and consistent.

Before creating the Pivot Table, you will almost certainly need to transpose the range that holds the financial statements so that the dates are running down the first column and the item names are the column headers

Create a PivotTable

1. Select source range
2. Click Insert tab
3. Click PivotTable button
4. Click OK
5. Add fields as needed using PivotTable Fields task pane
6. Modify and/or format as desired

Slicers allow you to filter a PivotTable or PivotChart without opening the Filters list box. you can add several Slicer panes to a PivotTable or PivotChart to filter by more than one field as needed.

Add a Slicer to a PivotTable

1. Make any cell within the PivotTable active
2. Click PivotTable Tools Analyze tab
3. Click Insert Slicer button
4. Click check box for desired field
5. Click OK

Timelines let you group and filter a PivotTable or PivotChart based on specific timeframes

Add a Timeline to a PivotTable

1. Make any cell within the PivotTable active
2. Click PivotTable Tools Analyze tab
3. Click Insert Timeline button
4. Click check box for desired field
5. Click OK
6. Select desired timeframe

By default, Excel uses the SUM function to summarize numeric data.

Change the PivotTable Summary Function

1. Make any cell within the PivotTable active
2. Click PivotTable Tools Analyze tab
3. Click Field Setting button
4. Click desired function
5. Click OK

Notice the different parts of a Pivot Table:

Filters – Give a drop-down list with which you can choose one item to examine

Columns – Will be the column headers in the Pivot Table

Rows – Will be the row headers in the Pivot Table

Values – These are the values that will be in the Pivot Table

# Pivot Charts

**10Pivot.xlsx**

A PivotChart displays the data in a PivotTable in a specified chart type. As you build a pivot chart from scratch, a pivot table is automatically created.

|  |  |
| --- | --- |
| Create a PivotChart from a PivotTable | Create a PivotChart without an Existing PivotTable |
| 1. Make cell active within PivotTable 2. Click PivotTable Tools Analyze tab 3. Click PivotChart button 4. Select desired chart type 5. Click OK | 1. Select range containing data for chart 2. Click Insert tab 3. Click PivotChart button arrow 4. Click PivotChart 5. Click OK 6. Add fields as needed in PivotTable Fields task pane to build the chart 7. Modify and/or format as required |

# Goal Seek

There are many ways to use data to make decisions. One of them is Goal Seek. The Goal Seek feature returns a value in a cell based on a target value you specify for another cell. The two cells must have a dependent relationship for Excel to calculate a value. With Goal Seek, you specify the final value, and Excel calculates in reverse to get it.

Goal Seek steps

1. Make desired cell active
2. Click Data tab
3. Click What-If Analysis button
4. Click Goal Seek
5. Enter desired cell address in Set Cell text box (the final desired result)
6. Enter desired target value in To Value text box (the formula to get there)
7. Enter dependent cell address in By Changing Cell text box (what will change)
8. Click OK
9. Click OK or Cancel

**11GoalSeek.xlsx**

In the example, set cell B11 to 76 by changing B9. The result shows that the student will need to get 81.5 on the final to get 76% overall.

**12GoalSeek.xlsx**

Change the balance on the January sheet to 3,000 by changing the second deposit.

# Scenarios

The Scenario Manager lets you save multiple sets of values for key cells in a worksheet. Switch between scenarios to view the impact of changing the input cells on one of the worksheet’s saved data sets.

Add a Scenario

1. Click Data tab
2. Click What-If Analysis button
3. Click Scenario Manager
4. Click Add button
5. Type name in Scenario name text box
6. Type or select variable cells in *Changing cells* text box (this works better if you use range names)
7. Click OK
8. Enter value for each changing cell
9. Click OK
10. Click Close button

The Scenario Manager dialog box has buttons for Add Delete, Edit, Merge, and Summary.

Save and display various worksheet models using the Scenario Manager.

A Scenario Summary Report presents the input data for each key cell in a scenario in tabular format with a results cell below each data set displaying the value if the data set is applied. It is created in a new sheet.

Generate a Scenario Summary Report

1. Click Data tab
2. Click What-If Analysis button
3. Click Scenario Manager
4. Click Summary button
5. If necessary, change cell address in *Result* *cells* text box
6. Click OK

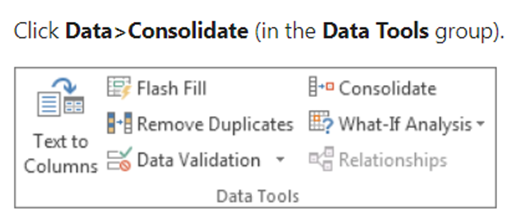
**13Scenario.xlsx**

Create scenarios for high and low inflation, and the original data, then show a summary.

# Consolidation

The Consolidate feature is another method to summarize data in multiple worksheets or workbooks.

Choose the summary function you want to use for the data that will be consolidated, add the references containing the data you want to summarize, specify the location of the labels to duplicate, and indicate whether to create a link to the source data.



Consolidate Data

1. Make starting cell active
2. Click Data tab
3. Click Consolidate button
4. If necessary, change function
5. Enter first range in Reference text box
6. Click Add button
7. Enter next range in Reference text box
8. Click Add button
9. Repeat steps 7-8 until all ranges have been added
10. If necessary, click Top row and/or Left column check boxes
11. If necessary, click Create links to source data check box
12. Click OK

If you do not create links in step 11, the consolidated data will be values and not references to the other sheets.

**14Consolidate.xlsx**

Consolidate the data in the three ranges from the other sheets.

# Data Table

**15DataTable.xlsx**

A Data Table is a range of cells containing a series of input values with a calculated formula result adjacent to each input value.

Create a One-Variable Data Table

1. Create variable data in column at right of worksheet
2. Enter formula one row above and one cell right of variable data (this is required by Data Tables)
3. Select data range, including formula cell
4. Click Data tab
5. Click What-If Analysis button
6. Click Data Table
7. Type cell address for variable data in source formula in *Column input* cell text box
8. Press Enter or click OK

**16DataTable.xlsx**

Create a two-variable data table.

# Excel on the Web

Get external data from a Web page

1. Make cell active at which to begin import
2. Click Data tab
3. Click New Query in the Get and Transform group
4. Click From Other Sources
5. Click From Web
6. Enter a URL
7. Click OK
8. A Navigator pane opens so you can choose what to import
9. Click Load

Use a blank worksheet, and import data from a Wikipedia page.

https://www.engineersedge.com/

https://www.engineersedge.com/standard\_material/Steel\_angle\_properties\_2.htm

http://www.mcfedries.com/products.html - Foods

Publish a worksheet as a Web page

Open the Save As dialog box and change the *Save as type* option to either *Single File Web Page* or *Web Page* to publish the current worksheet as a web page. Try this on any of the sample files.

# VBA Macros Part 1

**17Macro.xlsm**

A macro is an action or set of actions that you can use to automate tasks. Create a macro for a task that you repeat frequently, when the steps *do not* vary. Then the steps will be performed consistently, with fewer errors.

There are two types of macros: Procedure Macros, and Function Macros.

* **Procedure macros** (also known as subroutines) can do things such as activate another worksheet, open a file, or format cells
* **Function macros** (also called user-defined functions) take input (arguments), process them, and then return a result back to the spreadsheet

Record a Macro

1. Click the View tab
2. Click Macros button arrow
3. Click Record Macro
4. Type macro name
   1. must begin with a letter, and can contain letters, numbers, and underscores
   2. the name cannot contain spaces
5. Type a description in the *Description* text box
6. Click OK
7. Perform the desired actions
   1. if you make a mistake, correct it and keep going
   2. only the final result will be saved
8. Click Stop Recording button

A macro assigned to a shortcut key can be run by pressing Ctrl + the assigned letter. The shortcut keys are case-sensitive. If the letter is upper case, use Ctrl + Shift + the assigned letter. It is better not to use letters such as c, v, x, or p, because those are already shortcut keys in Excel.

Workbooks that contain macros are saved in the Excel Macro-Enabled Workbook (.xlsm) file format.

When you open a workbook with a macro, the default security setting is to disable all macros with notification. You must click the Enable Content button to use the macros.

# VBA Macros Part 2

**18Macro.xlsm**

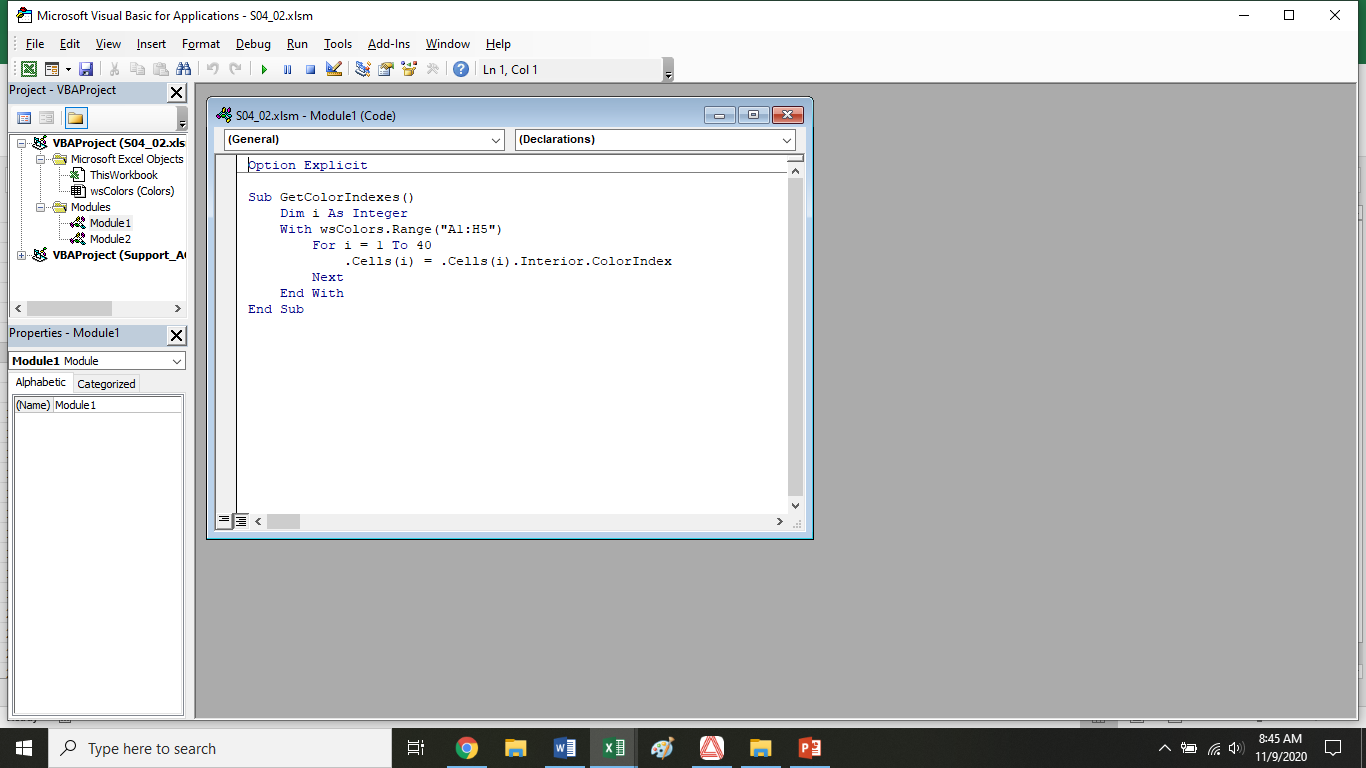
You can record macros by using the Record Macro command (Developer tab, Code group). You may need to add the Developer tab to Excel. Macros are recorded in the VBA programming language (Visual Basic for Applications). You can inspect and edit your macros in the Visual Basic Editor, a window that is opened by Excel.

The instructions for a macro are recorded in Visual Basic for Application (VBA) program code. To edit a macro, open the Macro dialog box, click the macro name to be edited, and the click the Edit button. A Microsoft Visual Basic for Applications window opens, displaying the code where you can edit the macro’s program.

Alt F11 also brings up the VBE, then F7 to view the code.

A macro is saved in the workbook that was active when the macro was created. You could save all of your macros in one workbook, then have that workbook open whenever you are working in Excel. The Personal Workbook (Personal.xlsb) can be used to store macros that you use quite frequently. This workbook will appear as soon as you record a macro. The macros will be available whenever you close down Excel and open up a new workbook. Other sheet objects are specific to a particular workbook, but the Personal Macro Workbook is global. If a macro is saved as a global macro as part of a personal macro workbook, you can use it from another file.

You can write code in the Visual Basic Editor window.



# Financial Analysis

Excel has over 400 built-in functions. You can use them in your VBA functions. Use Application.WorksheetFunction in your code. For example, to call the PMT function you would use:

Application.WorksheetFunction.PMT(Rate, NPer, PV)

Where Rate, NPer, Pmt, and PV are variables in your code. They are the arguments to the built-in PV function.

# Excel Analysis ToolPak

There is an add-in to help with statistical analysis. To get it, go to File, Options, Add-Ins. In the Manage list, choose Excel Add-Ins, then click Go. Select the Analysis Tool Pack and click OK.

Now if you click on the Data tab, you will see Data Analysis in the Analysis group to the right.

**References:**

Microsoft Excel Formulas and Functions – Paul McFedries  
Benchmark Series: Microsoft Excel 2019 Levels 1&2 – Audrey Roggenkamp, Ian Rutkosky and Nita Rutkosky  
VBA for Modelers - S. Christian Albright

**Notes**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_