

Meet your Barbies!

Hi Barbie!

Hi Ken!



Bridgett Milner

Director of Institutional Effectiveness
Office of Institutional Analytics
Indiana University



Sasha Haywood

Sr. Operational Mgr (Data Analytics)
Office of Enrollment Management
Indiana University

Hi Ken!

Hi Barbie!

Hi Barbie!

Hi Ken!

Hi Barbie!

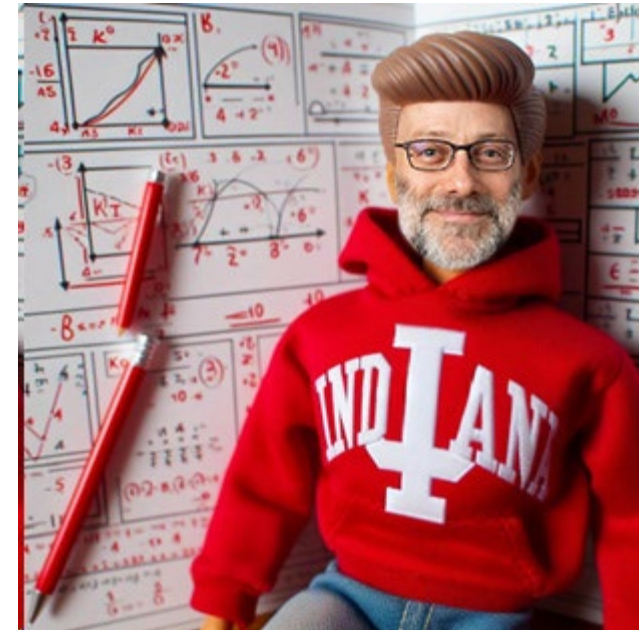
Hi Ken!

Hi Ken!

But really, we have a **whole dreamhouse** of Barbies and Kens at IU

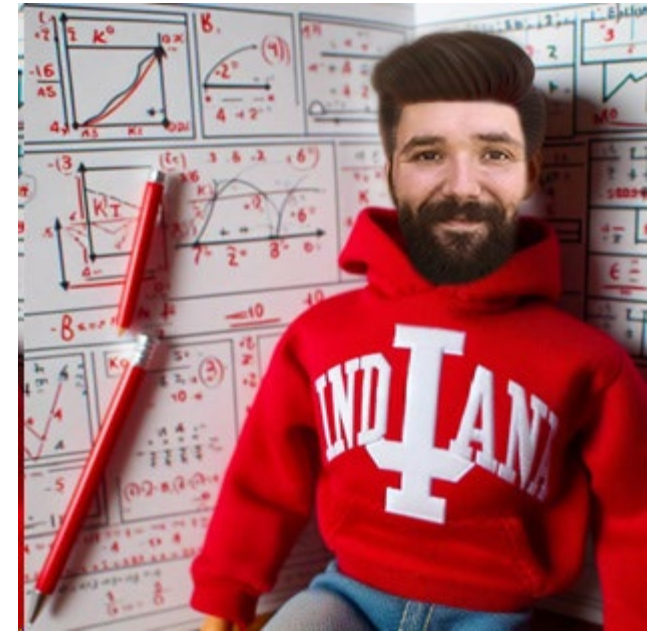


Senior Associate Director
of Strategic Planning and
Research Barbie
(aka Lindsay Boersma)



Director of
Strategic
Planning and
Research
Ken
(aka Doug
Anderson)

Data
Analyst
Ken
(aka Joe
Russo)



Our roles

- Support campus leadership in making data driven decisions through providing:
 - reporting,
 - analysis,
 - research,
 - projections,
 - data visualizations, and
 - simulations.





Context

Need: information that is easy to understand, memorable, visually appealing, and perfectly on brand.

Want to Avoid: Inconvenient format which requires manual updates

Today's Examples (Both in Excel and Tableau):

Custom Color Palettes; Fonts; Number Formats; Conditional Formatting; Some Non-Standard Graphs

Excel

Sparklines

Spin Buttons

Recording a Macro

Tableau

Hidden Sheets

Stories

Exporting to Text

We will share slides after the presentation!

Custom Color Palettes



Select Color Palette:

Tableau Classic 20

Theme Colors

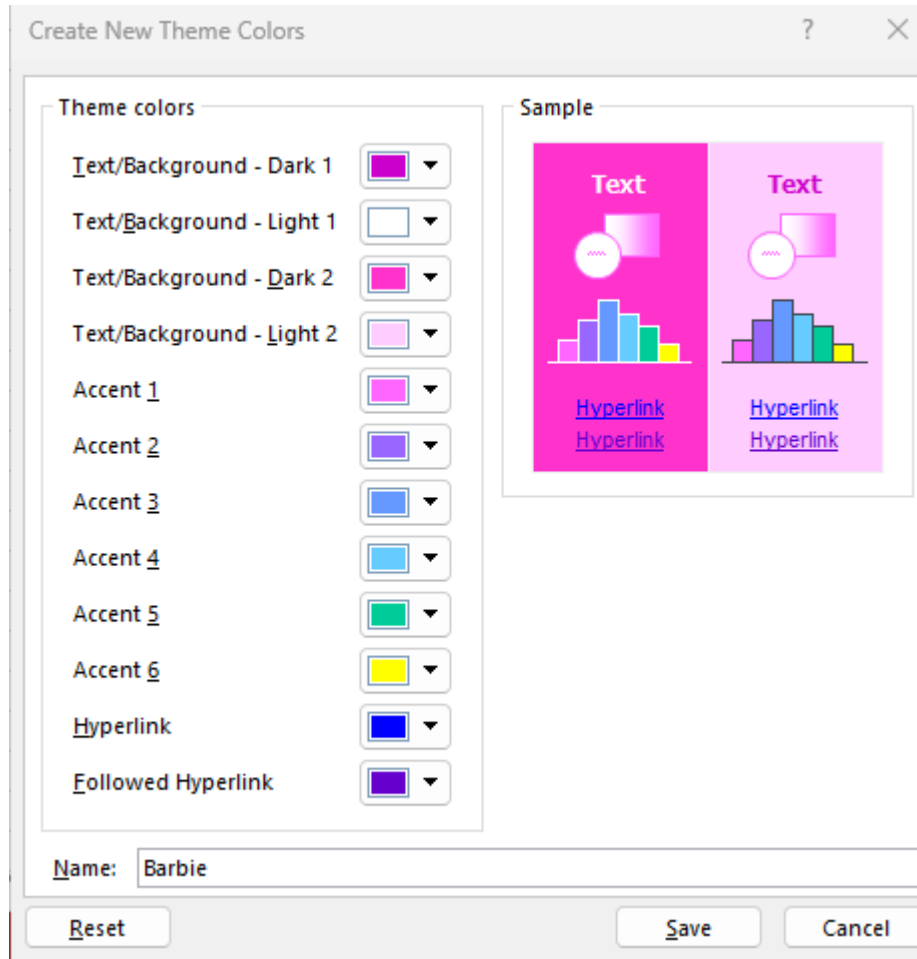
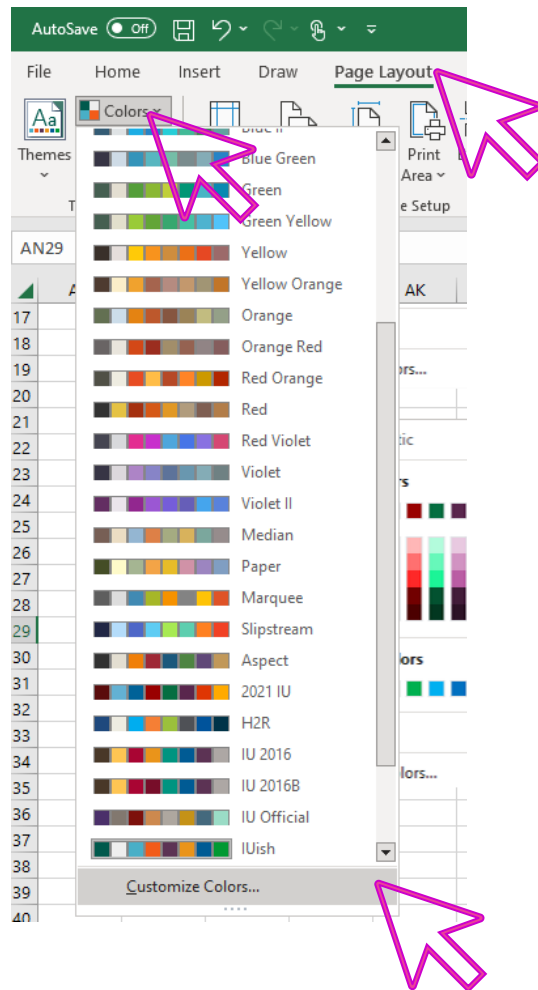
Standard Colors

--	--	--	--	--	--	--

No Fill

More Colors...

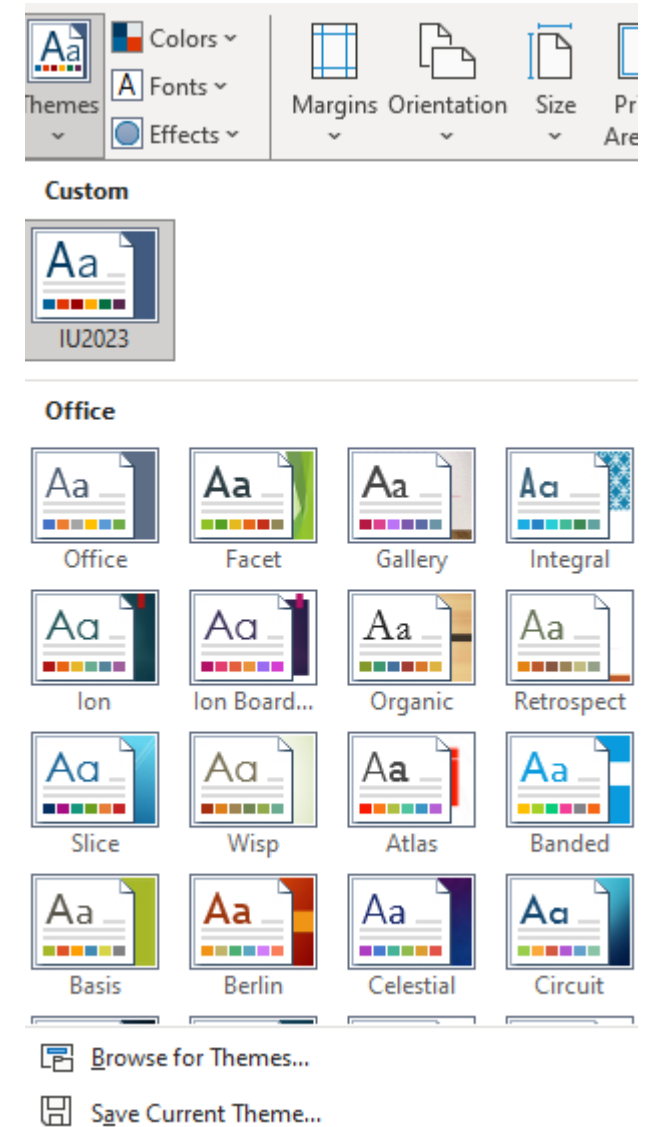
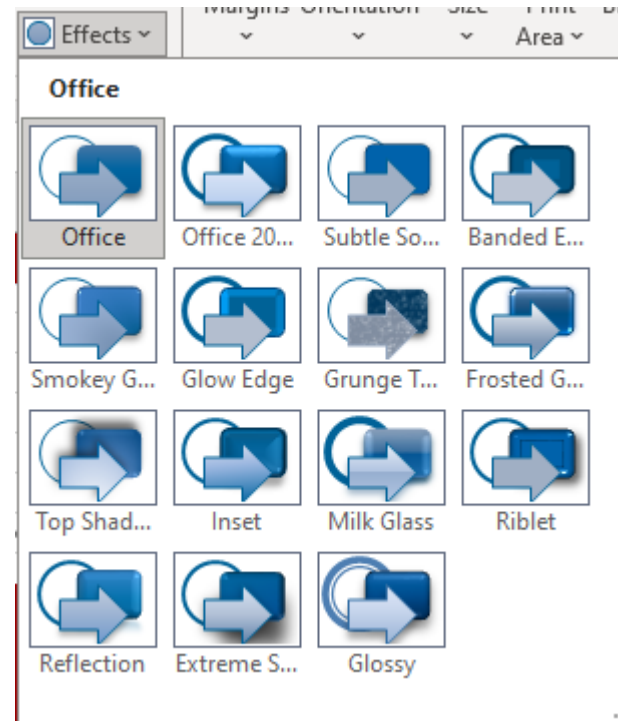
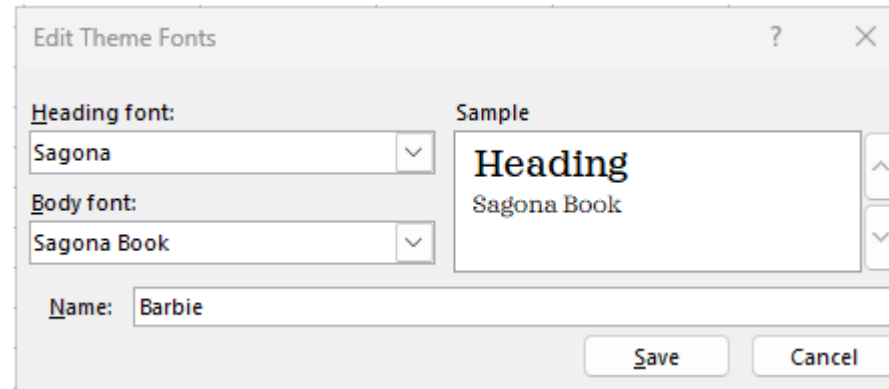
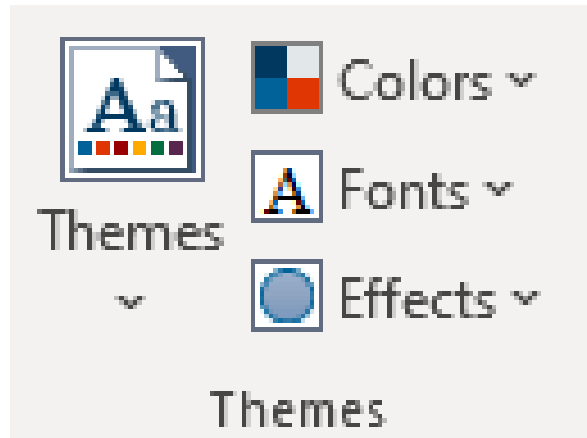
Excel (any Office Suite Product)



To share - navigate to the .xml file saved and send to the other Barbies and Kens on your team

C:\Users\Barbie\AppData\Roaming\Microsoft\Templates\Document Themes\Theme Colors

Full Theme





Tableau

C:\Users\Barbie\Documents\My Tableau Repository

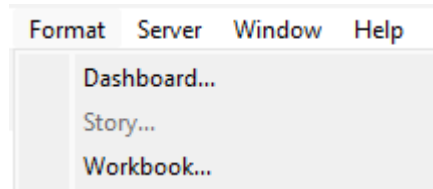
Milner, Bridgett.

```
<color-palette name="2021 Crimson Gradient" type="ordered-sequential" >  
  <color>#5A0C0C</color>  
  <color>#640303</color>  
  <color>#6E0606</color>  
  <color>#780909</color>  
  <color>#800000</color>  
  <color>#860000</color>  
  <color>#8f0000</color>  
  <color>#990000</color>  
  <color>#aa0707</color>  
  <color>#bb110e</color>  
  <color>#DC231E</color>  
  <color>#F92F2F</color>  
  <color>#F23A3F</color>  
  <color>#F94F55</color>  
  <color>#FF636A</color>  
  <color>#FF9DA4</color>  
  <color>#FFD6DB</color>  
  <color>#FFE7EA</color>  
  <color>#FFF7F8</color>  
  <color>#FFFFFF</color>  
</color-palette>
```

To share - copy edited preferences file and share with the dreamhouse



Tableau Fonts



Fonts

All

- Benton Sans

Worksheets

- Benton Sans 16

Tooltips

- Benton Sans 10

Worksheet Titles

- Benton Sans 11

Dashboard Titles

- Benton Sans 18

Story Titles

- Benton Sans 20

Less ^

Lines

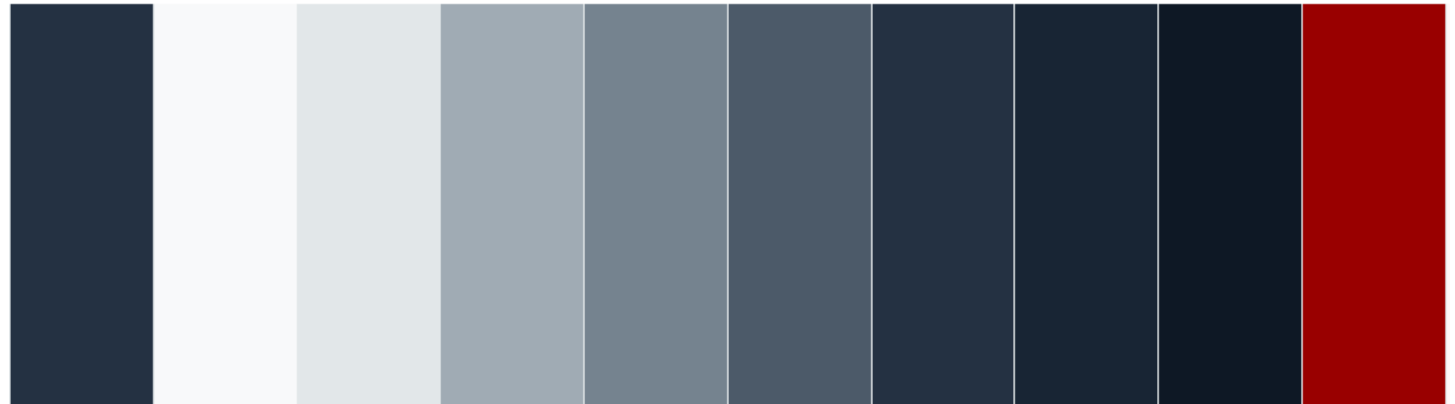
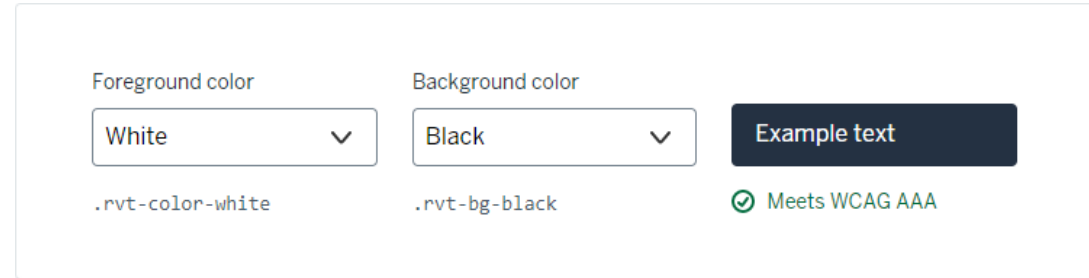
Grid Lines

- Off

More v



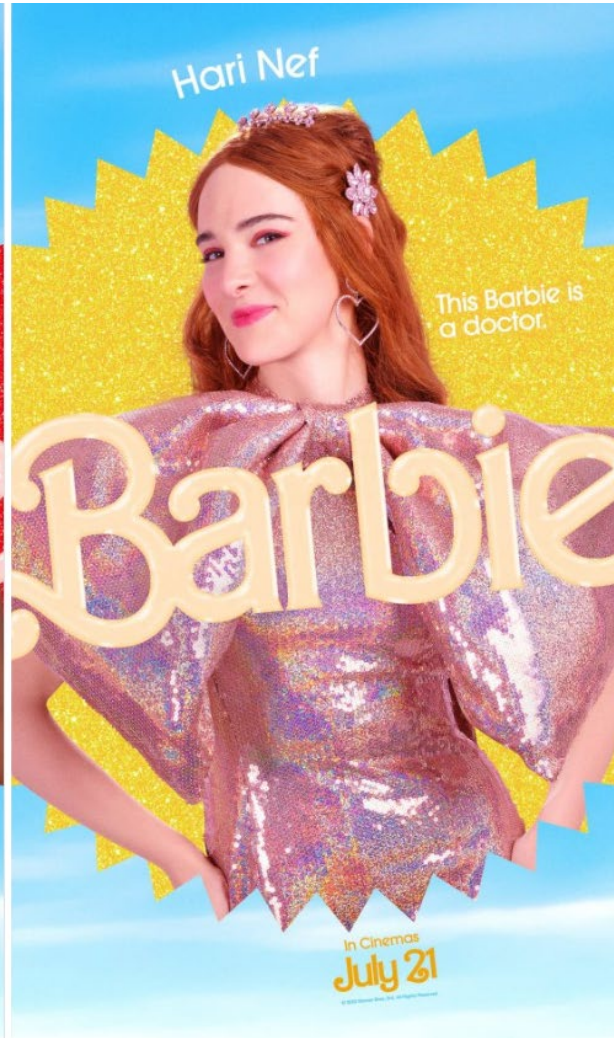
IU Resources



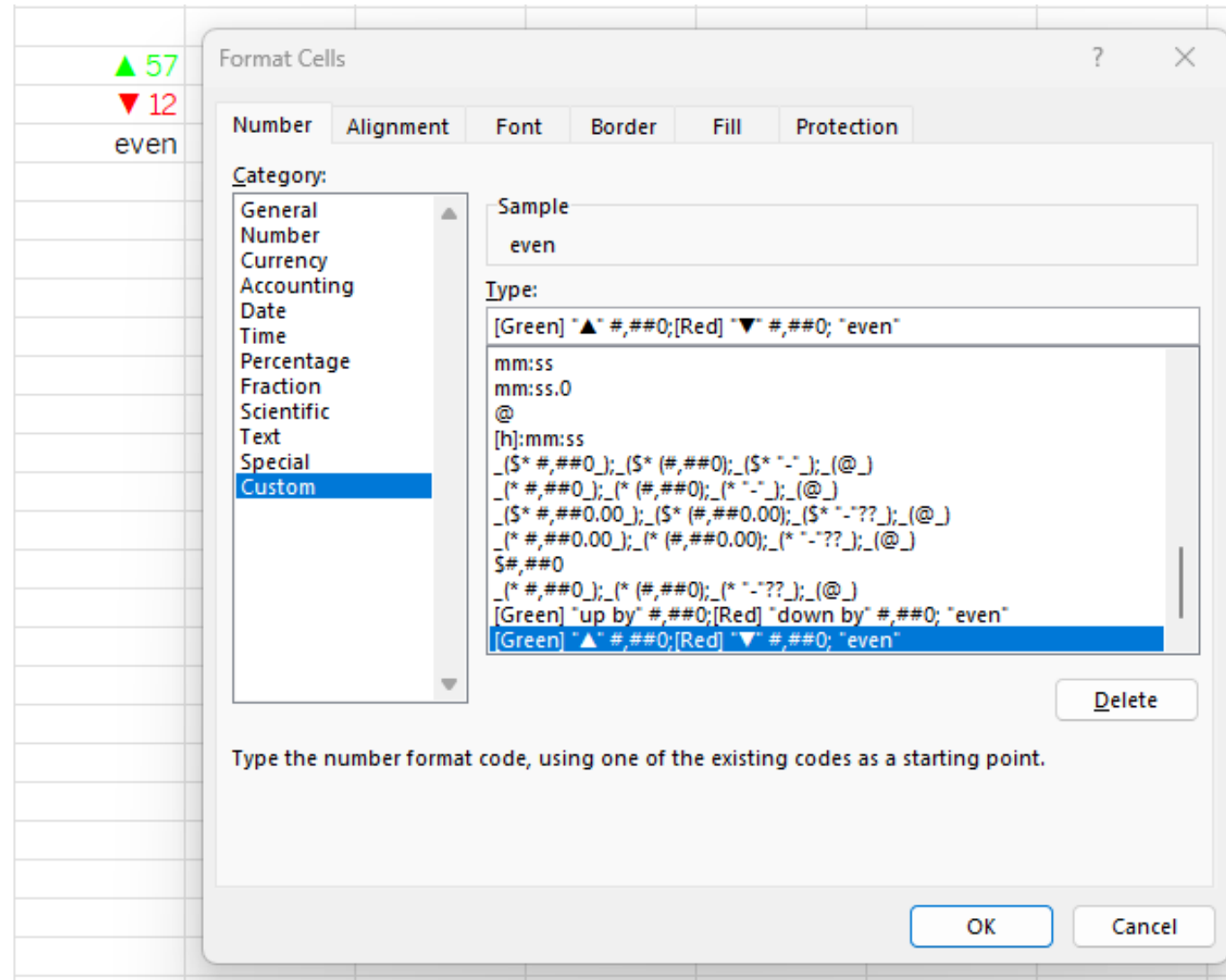
<https://www.iu.edu/brand/brand-expression/visual-language/color/index.html>

<https://rivet.iu.edu/>

Customize Everything!



Custom Number Formats in Excel



The screenshot shows the 'Format Cells' dialog box in Microsoft Excel. The 'Number' tab is selected, and the 'Category' list on the left has 'Custom' selected. The 'Sample' field displays 'even'. The 'Type' field contains the custom format code: `[Green] ^▲^ #,##0;[Red] ^▼^ #,##0; "even"`. A list of existing number format codes is shown below, with the custom code highlighted. A 'Delete' button is located to the right of the list. At the bottom of the dialog, there is a text prompt: 'Type the number format code, using one of the existing codes as a starting point.' and 'OK' and 'Cancel' buttons.

▲ 57
▼ 12
even

Format Cells

Number Alignment Font Border Fill Protection

Category:

- General
- Number
- Currency
- Accounting
- Date
- Time
- Percentage
- Fraction
- Scientific
- Text
- Special
- Custom**

Sample
even

Type:

```
[Green] ^▲^ #,##0;[Red] ^▼^ #,##0; "even"  
mm:ss  
mm:ss.0  
@  
[h]:mm:ss  
_($* #,##0);_($* (#,##0);_($* "-" );_(@_)  
_(* #,##0);_(* (#,##0);_(* "-" );_(@_)  
_($* #,##0.00);_($* (#,##0.00);_($* "-"??);_(@_)  
_(* #,##0.00);_(* (#,##0.00);_(* "-"??);_(@_)  
$#,##0  
_(* #,##0);_(* (#,##0);_(* "-"??);_(@_)  
[Green] "up by" #,##0;[Red] "down by" #,##0; "even"  
[Green] ^▲^ #,##0;[Red] ^▼^ #,##0; "even"
```

Delete

Type the number format code, using one of the existing codes as a starting point.

OK Cancel



Custom Number Formats in Tableau

Can include words and symbols

Specify number of digits

Separate formats for positive numbers, negative numbers, zero

The screenshot shows the Tableau interface for selecting and customizing number formats. On the left, a list of format options is displayed, with 'Custom' selected and highlighted in blue. The options are: Automatic, Number (Standard), Number (Custom), Currency (Standard), Currency (Custom), Scientific, Percentage, and Custom. On the right, the 'Custom' format editor is open, showing a 'Format:' field with the text '+#,##0% over;-#,##0% from;even with'. Below this, a smaller inset window shows another 'Custom' format editor with the text '▲0.##;▼0.##;even'.



Unicode Symbols

Can be pasted into
calculated
variables, aliases,
number formats,
and just about
anything else.

Chess Symbols

Quantity of characters:



White Chess Queen ▶

Unicode Number: U+2655

HTML Code: ♕

Copy

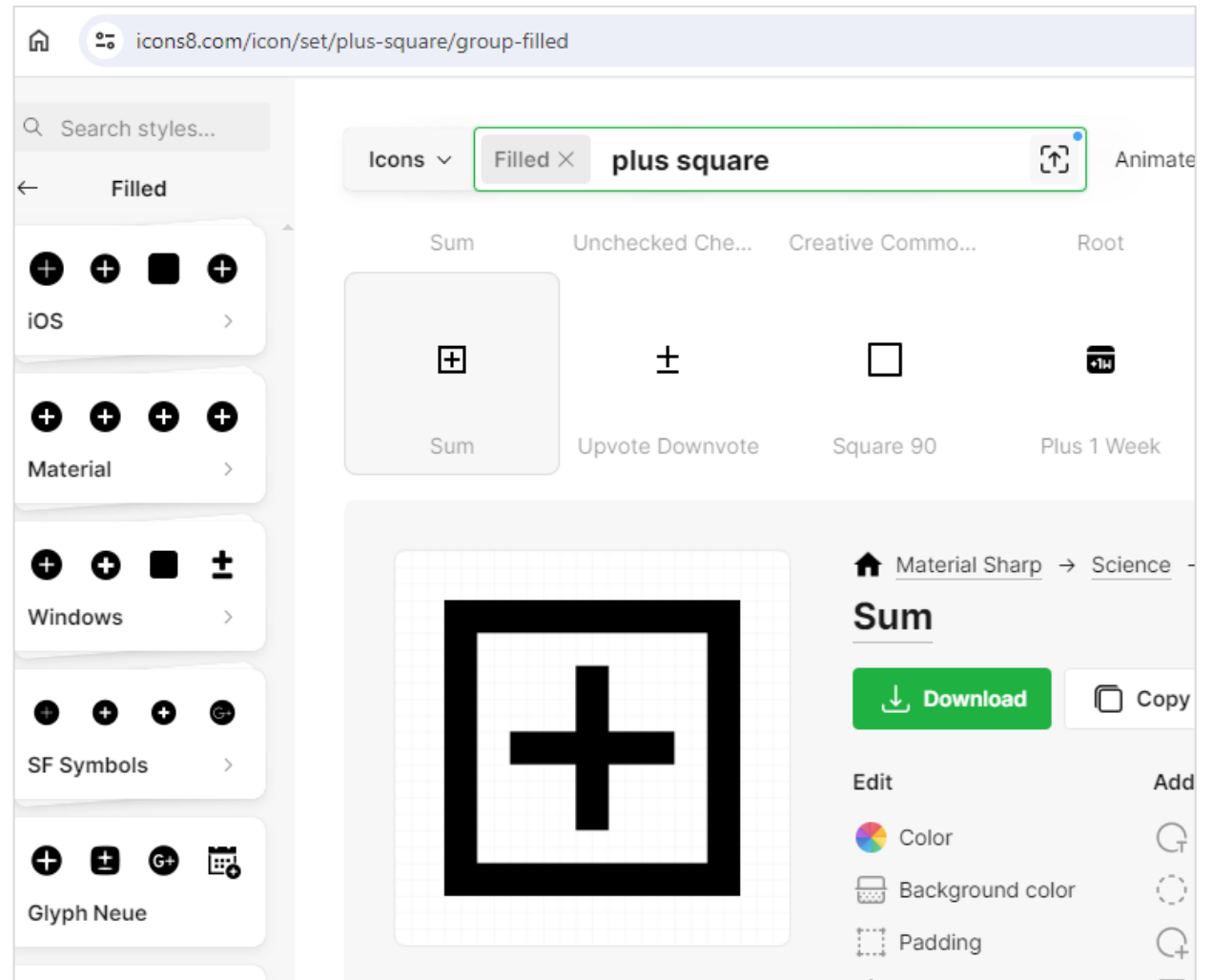




More shapes in Tableau!

I wanted to make a key explaining how to sort and expand a table in Tableau. The “drill down” and “sort” icons aren’t Unicode characters.

Download for free at icons8.com

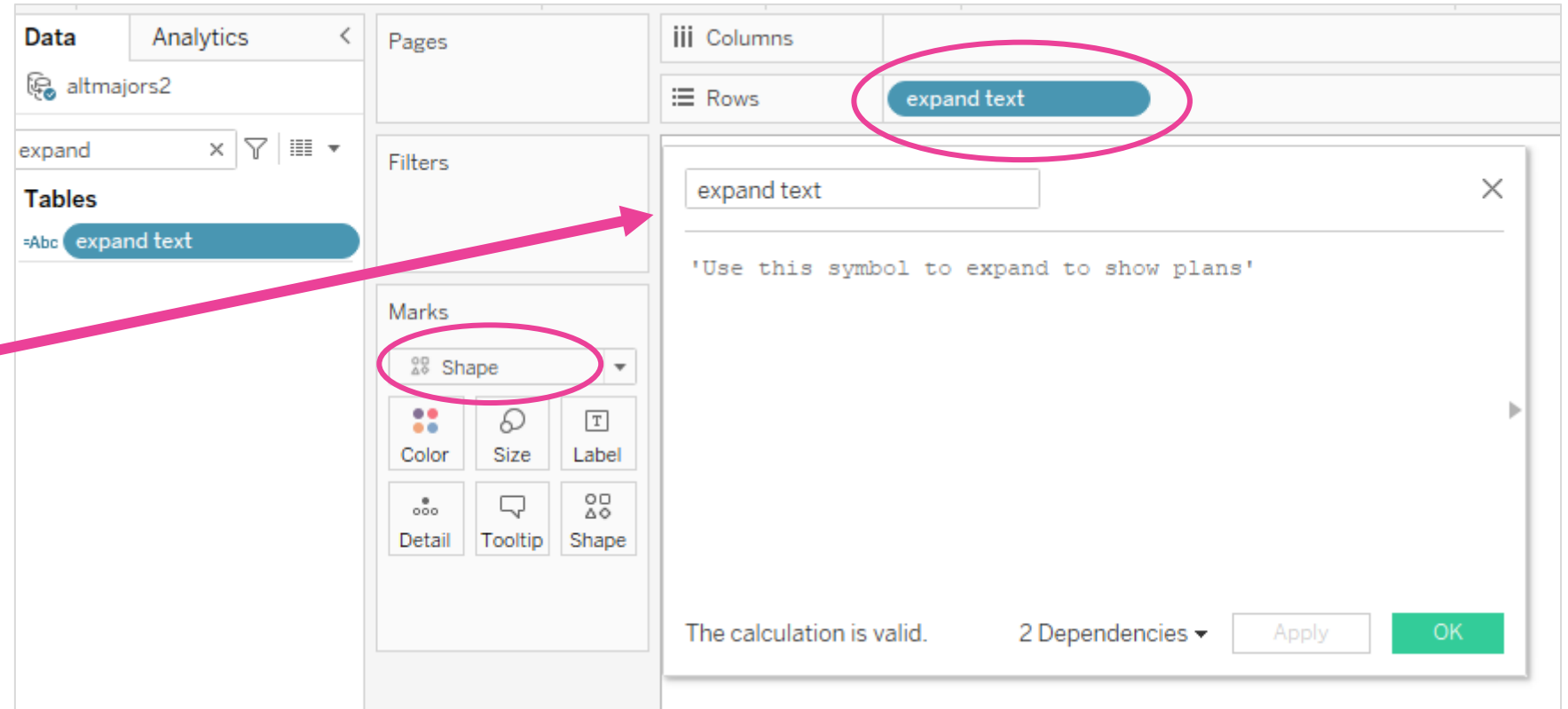


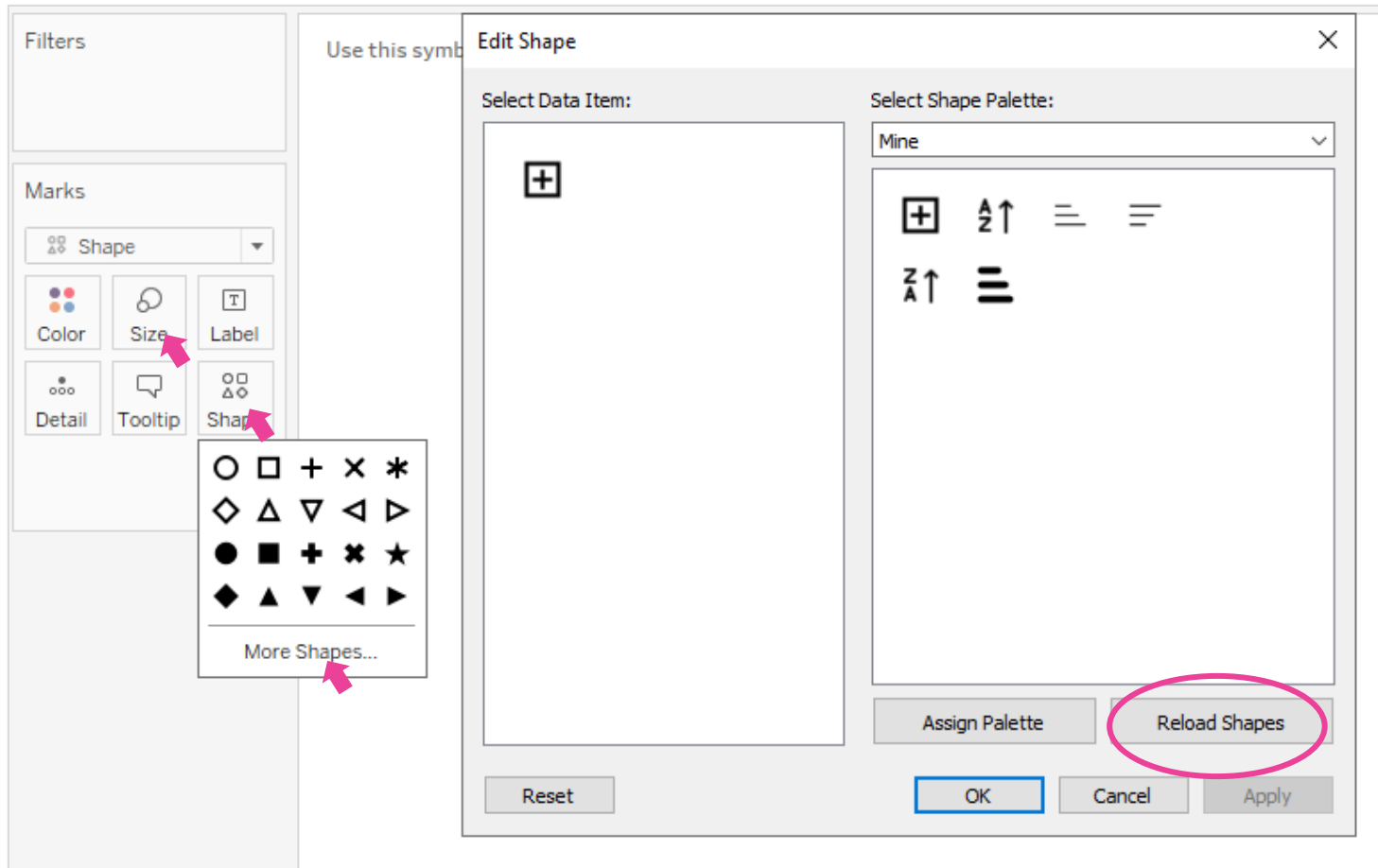


Upload as .png
into [My Tableau Repository](#) >
[Shapes](#)

Create
calculated field
with the text that
you want next to
the image.

Put that field on
Rows, and
change Marks to
Shape





Reload Shapes to see your new shapes, and then select the one you want. Adjust the size.

Put these worksheets (one for each symbol) on a dashboard, and you have a key!

Use this symbol to expand to show plans	+
Use this symbol to sort by field count(Student)	≡

IU Resources

The Rivet design team has created icons for use in IU products:

ssw.iu.edu/stickers/

sample_gates



scales



shield



shirt



shoe



shot



signature



silverware



smart_watch



snowflake



soap



society_book



speech_bubbles



target



test



ticket



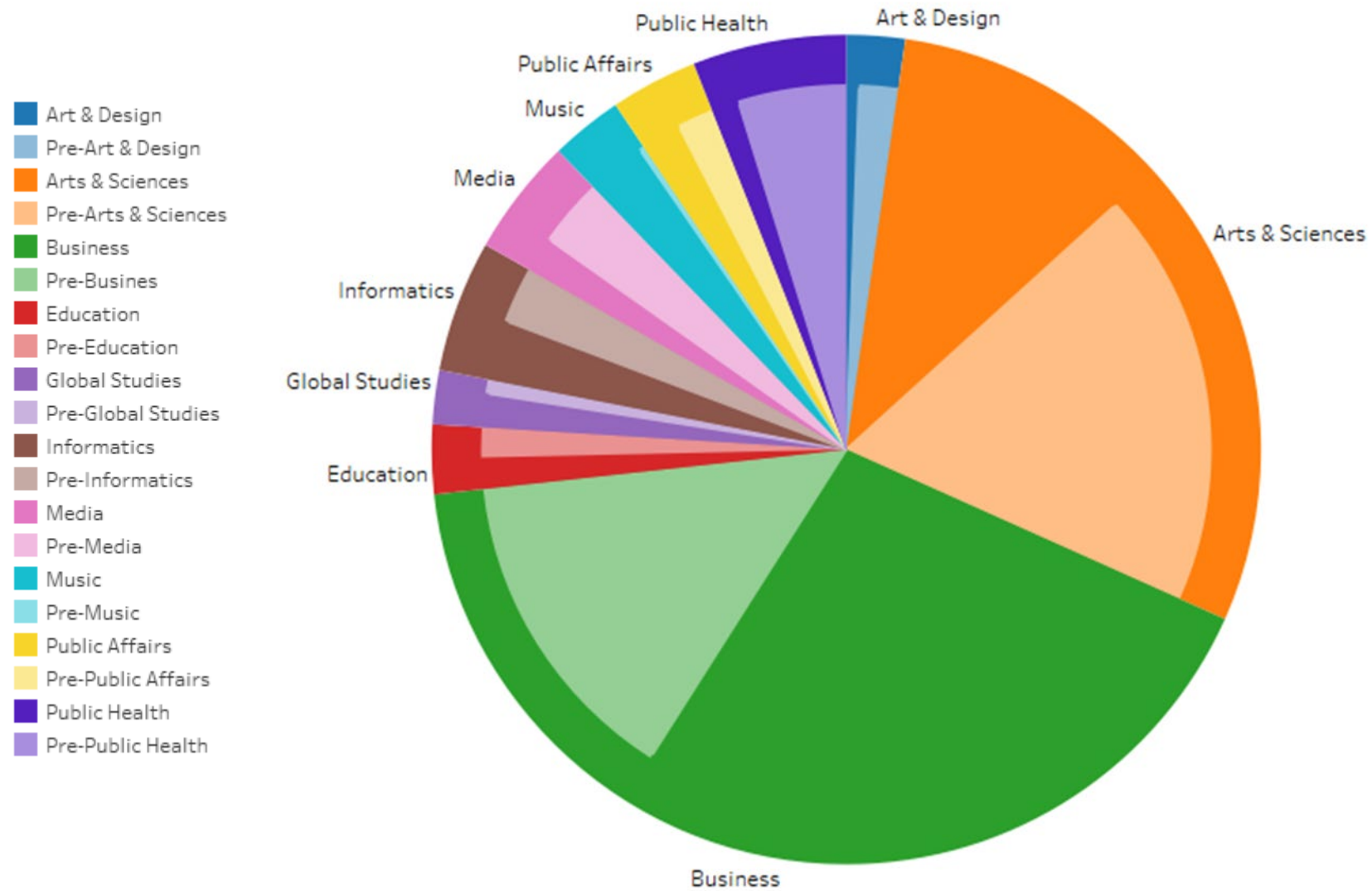


Some Weird Graphs



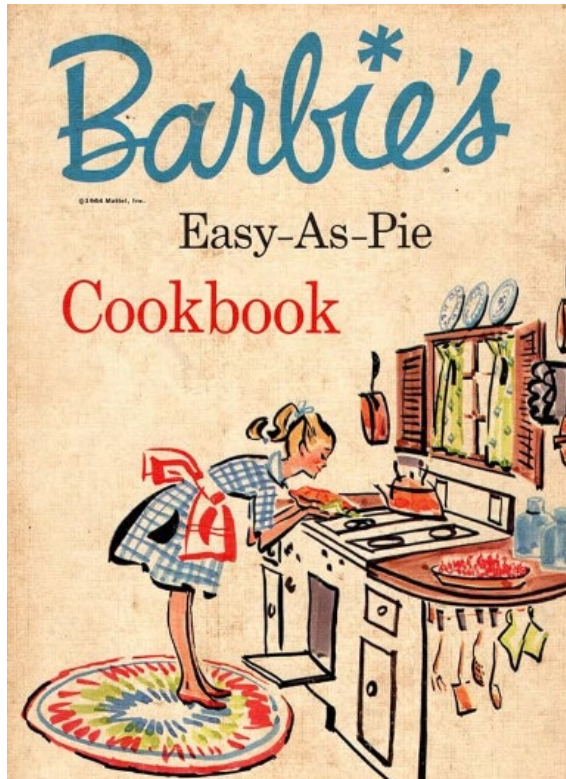


A Fancy Pie!





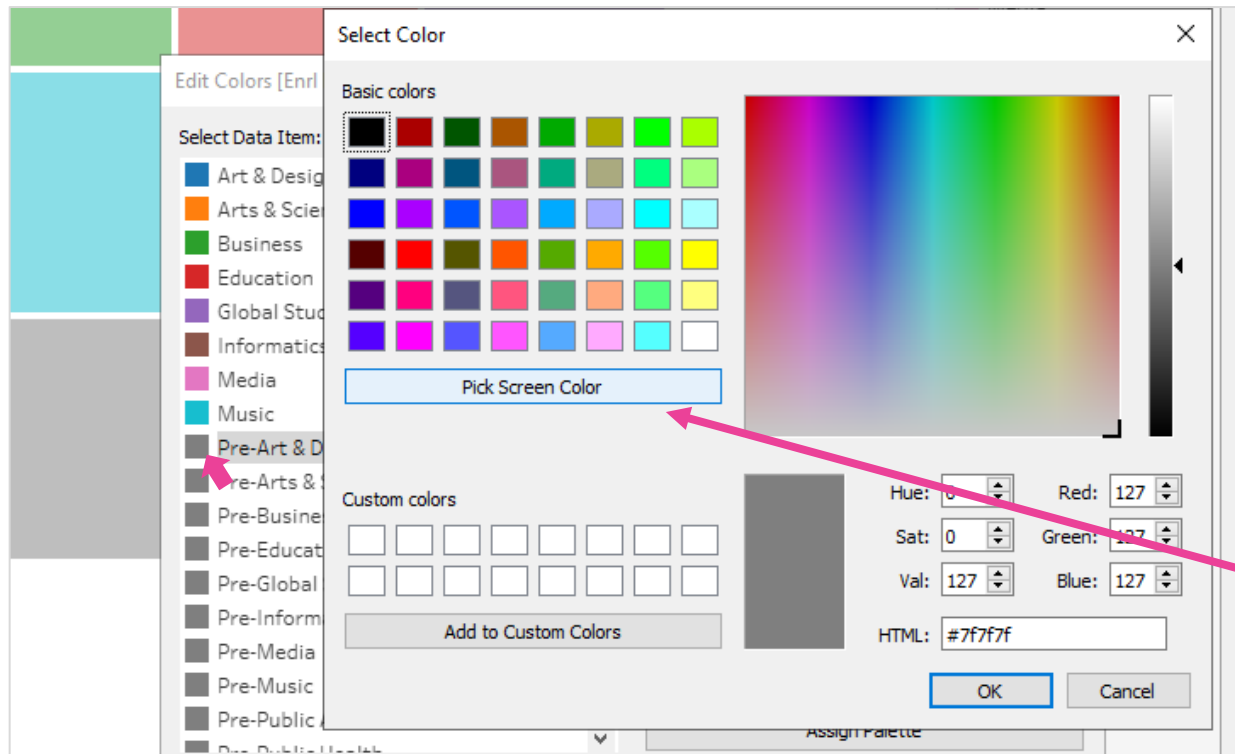
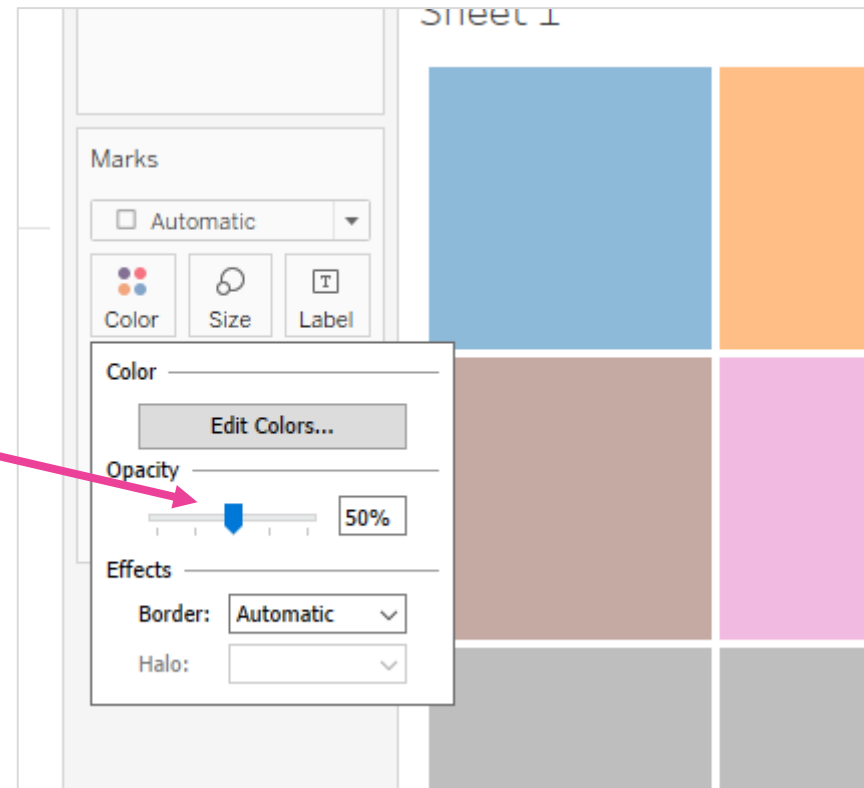
You can set default colors once!



The screenshot shows a data management interface. On the left, there is a 'Tables' list with the following items: 'Enrl Plan' (highlighted in blue), 'Enrl Program', 'ldno2', 'Measure Names', 'data.sas7bdat (Count)', and 'Measure Values'. A context menu is open over the 'Enrl Plan' table, listing various actions: 'Add to Sheet', 'Duplicate', 'Rename', 'Hide', 'Aliases...', 'Create', 'Transform', 'Convert to Measure', 'Change Data Type', 'Default Properties' (highlighted in blue), 'Geographic Role', 'Image Role', 'Group by', 'Folders', 'Hierarchy', 'Replace References...', and 'Describe...'. A sub-menu is open for 'Default Properties', showing options: 'Comment...', 'Color...' (with a pink arrow pointing to it), 'Shape...', and 'Sort...'. The interface also includes a search bar, a 'Rows' section, and a 'Sheet 1' area.

Put your variable on the color card.

Assign your programs to the colors you want and adjust the opacity to 50%

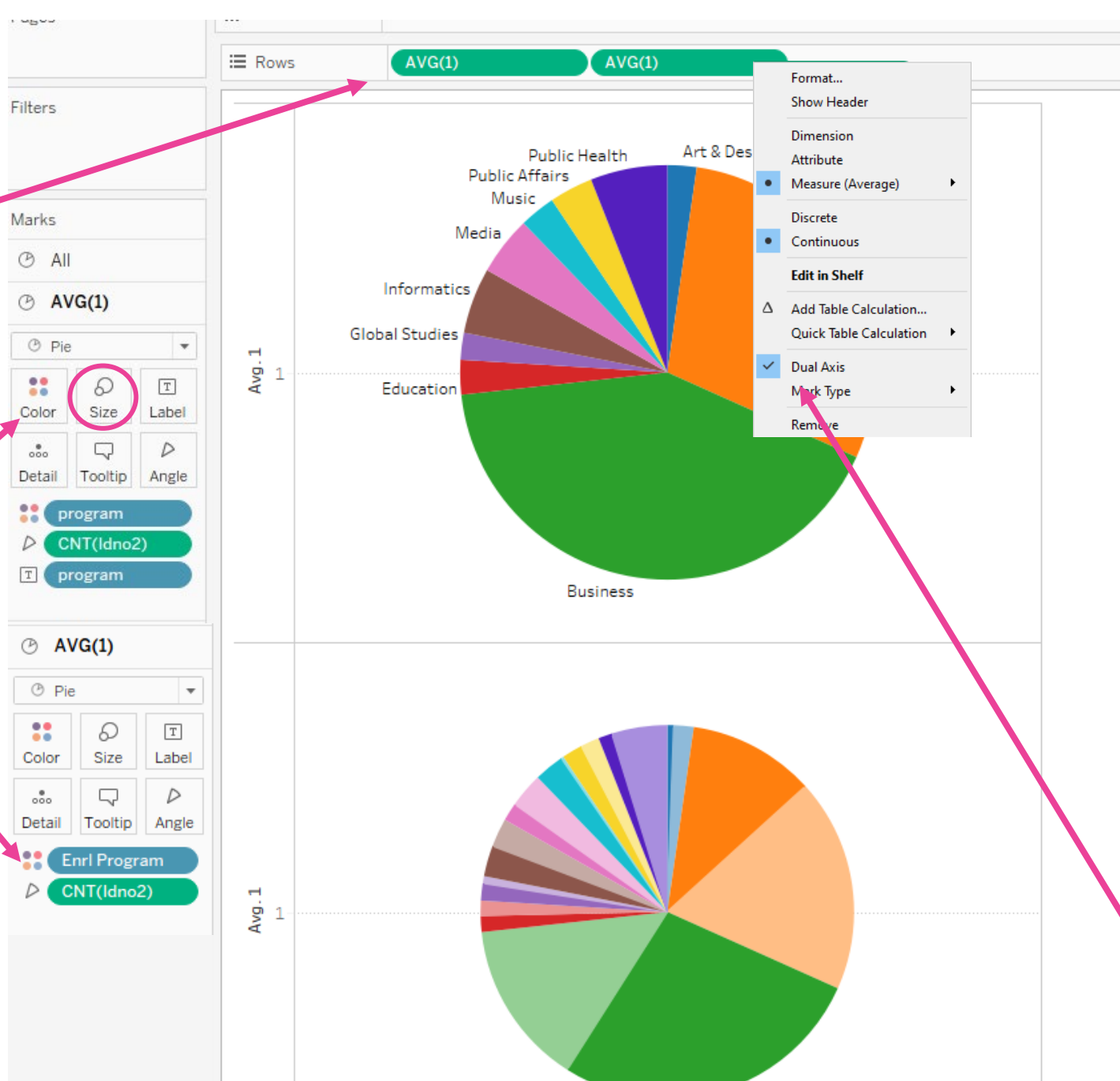


Double click on the pre-major and pick the screen color

Type **AVG(1)** on Rows card twice

Put binned variable on first card and original variable on other

Set the size of top pie larger



Edit both axis and unclick "Include Zero"

The 'Edit Axis [Avg. 1]' dialog box is shown with the 'Tick Marks' tab selected. The 'Range' section has 'Automatic' selected. The 'Include zero' checkbox is unchecked. The 'Scale' section has 'Positive' selected. The 'Axis Titles' section has 'Title' set to 'Custom' and 'Avg. 1', and 'Automatic' checked for the subtitle.

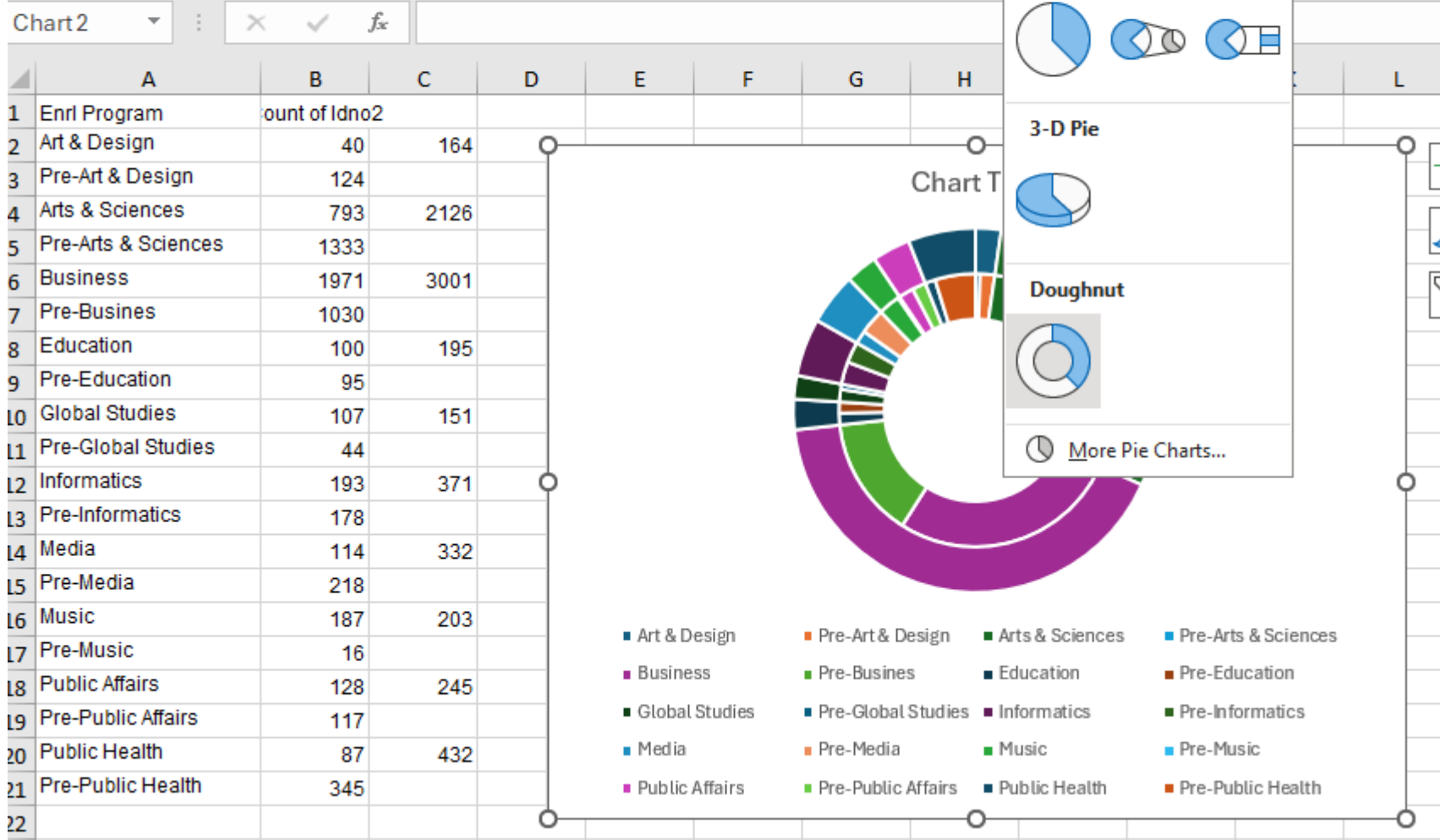
Set rows to dual axis



File Home **Insert** Page Layout Formulas Data Review View Automate Help Acrobat SAS Chart

PivotTable Recommended Table Pictures Shapes Icons 3D SmartArt Screenshot Recommended Charts Maps PivotChart 3D Map

Tables Illustrations



2-D Pie

3-D Pie

Doughnut

More Pie Charts...

Format Data Series

Series Options

- Chart Area
- Chart Title
- Legend
- Plot Area
- Series 1
- Series 2

Angle of first slice: 0°

Doughnut Explosion: 0%

Doughnut Hole Size: 0%

Fill

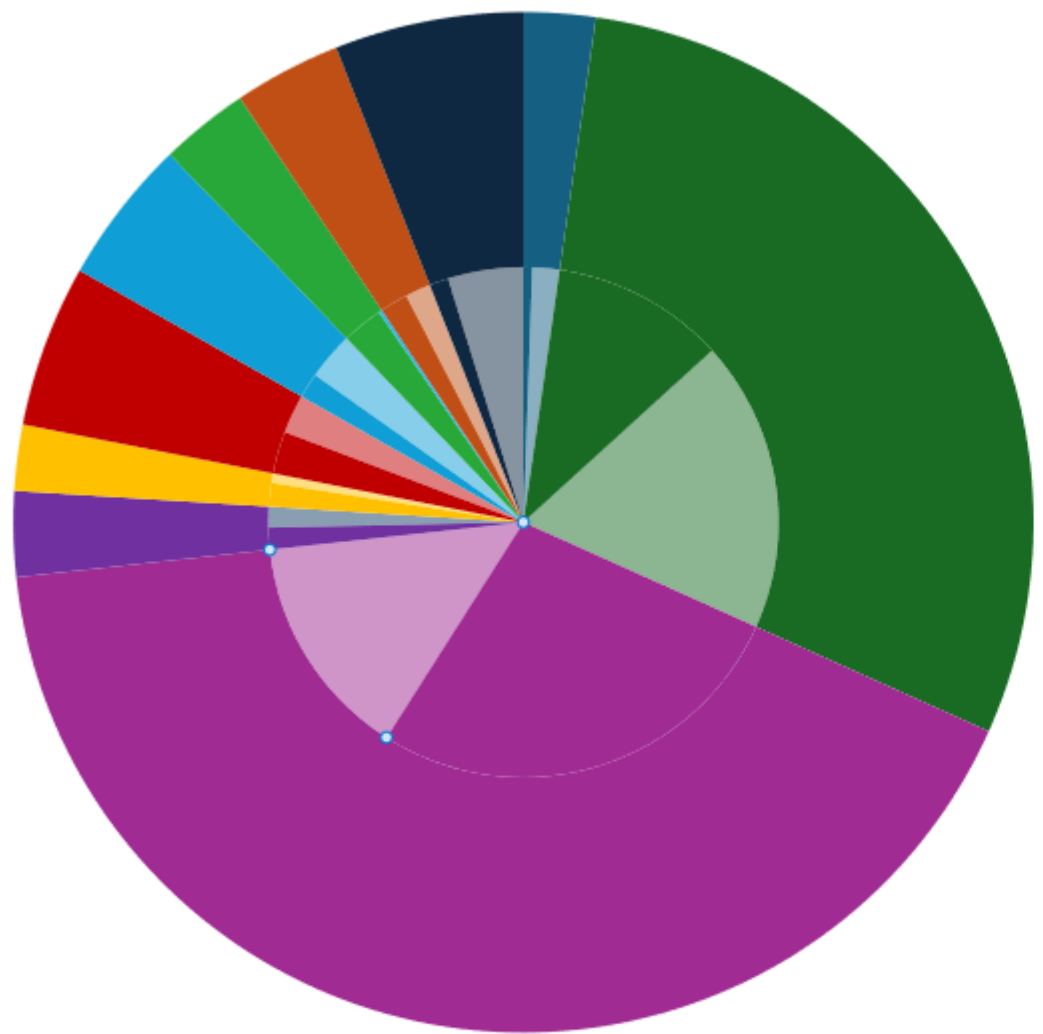
Border

- No line
- Solid line
- Gradient line
- Automatic



For each **pre-**
major, set the
color to match
the **major** color,
and set
transparency
to 50%

Chart Title



- | | | | | |
|----------------|--------------------|----------------------|-----------------------|----------------------|
| ■ Art & Design | ■ Pre-Art & Design | ■ Arts & Sciences | ■ Pre-Arts & Sciences | ■ Business |
| ■ Pre-Busines | ■ Education | ■ Pre-Education | ■ Global Studies | ■ Pre-Global Studies |
| ■ Informatics | ■ Pre-Informatics | ■ Media | ■ Pre-Media | ■ Music |
| ■ Pre-Music | ■ Public Affairs | ■ Pre-Public Affairs | ■ Public Health | ■ Pre-Public Health |

Format Data Point

Series Options

Fill

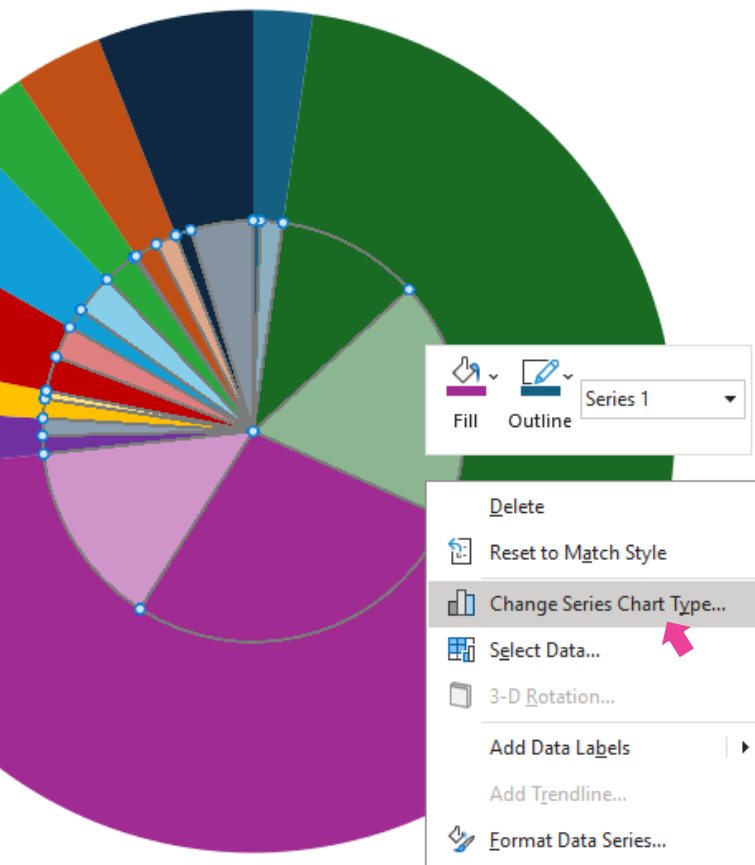
- No fill
- Solid fill
- Gradient fill
- Picture or texture fill
- Pattern fill
- Automatic
- Vary colors by slice

Color

Transparency

Border

- No line
- Solid line
- Gradient line
- Automatic



- Pre-Art & Design
- Arts & Sciences
- Pre-Arts & Sciences
- Business
- Education
- Pre-Education
- Global Studies
- Pre-Global Studies

Change Chart Type

Recommended Charts | All Charts

Recent
Templates
Column
Line
Pie
Bar
Area
XY (Scatter)
Map
Stock
Surface
Radar
Treemap
Sunburst
Histogram
Box & Whisker
Waterfall
Funnel
Combo

Custom Combination

Choose the chart type and axis for your data series:

Series Name	Chart Type	Secondary Axis
Series1	Pie	<input type="checkbox"/>
Series2	Doughnut	<input type="checkbox"/>

OK Cancel

Format Data Series

Series Options

- Chart Area
- Chart Title
- Legend
- Plot Area
- Series 2
- Series 1

Series Options

Plot Series 0

Primary

Secondary Axis

Angle of first slice: 0°

Pie Explosion: 0%

Format Data Series

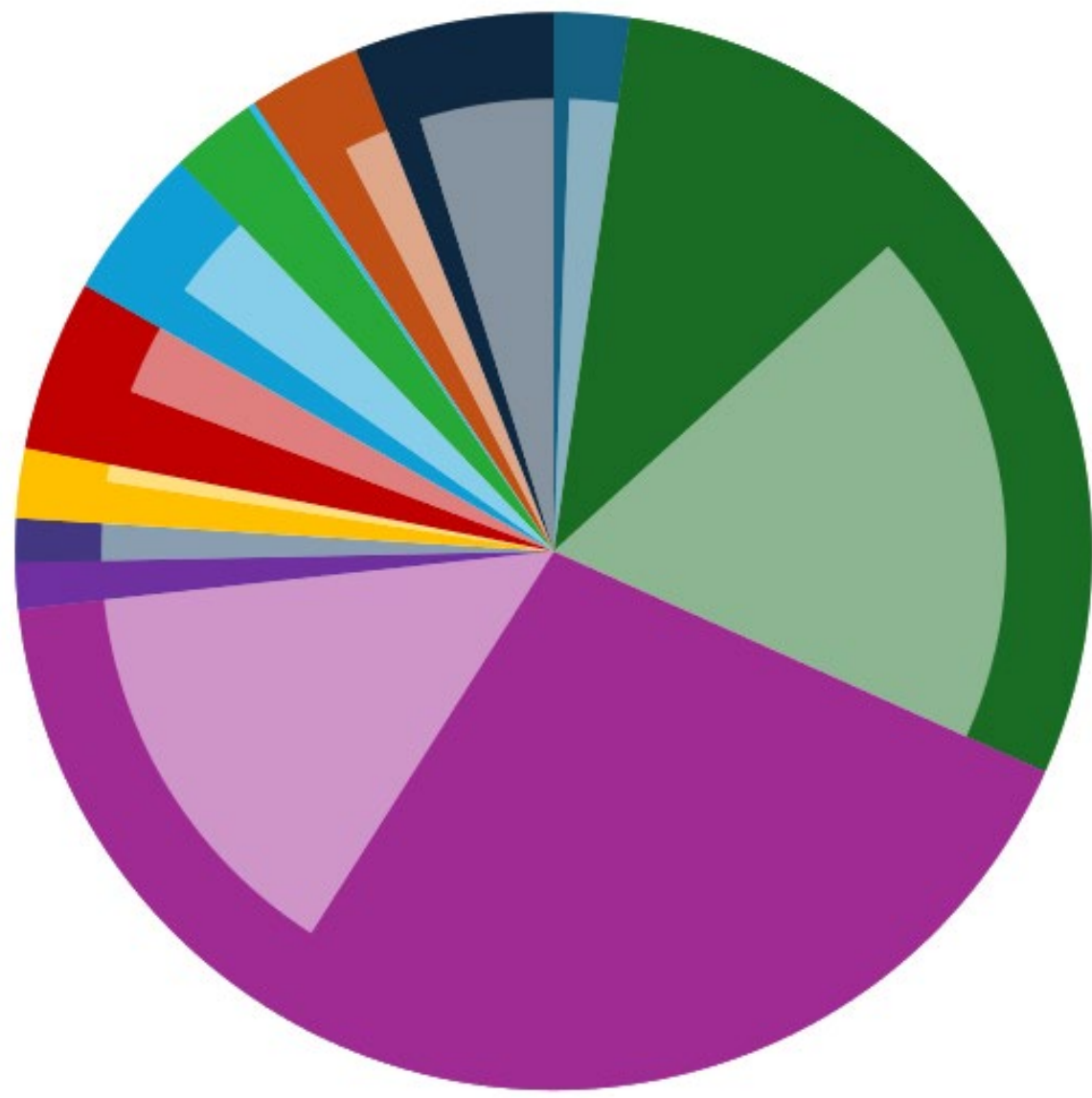
Series Options

- Chart Area
- Chart Title
- Legend
- Plot Area
- Series 2
- Series 1

Angle of first slice: 0°

Doughnut Explosion: 0%

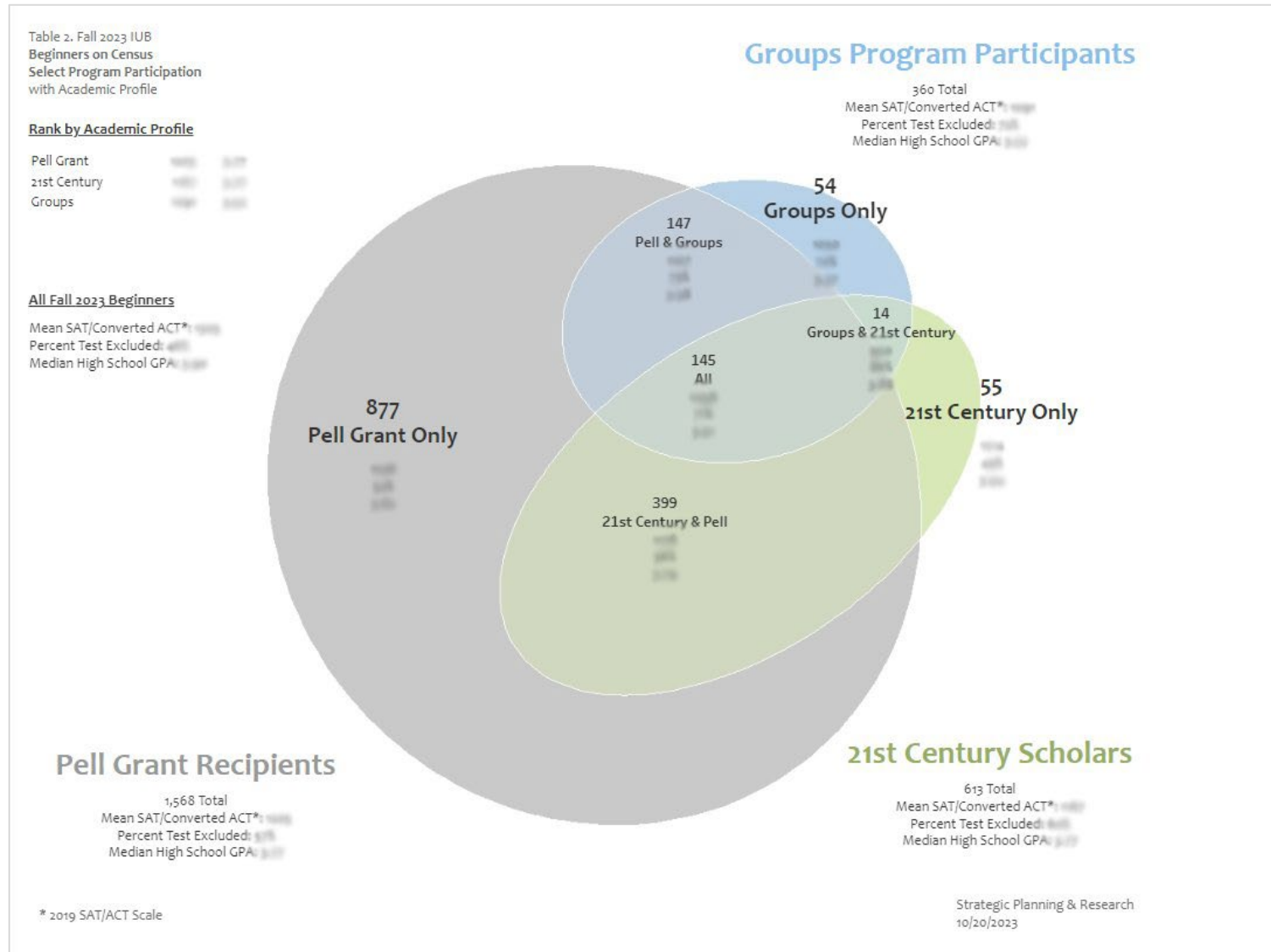
Doughnut Hole Size: 84%





Venn Diagram drawn to scale (Euler)

Text is on floating transparent worksheets



The scaled Venn diagram can easily be created in R! We'll give you the code!

```
55 library(eulerr)
56 library(grid)
57
58 # Here's an example of the format.
59 # Numbers indicate number of items in THAT SECTION of the Venn. NOT total number for that category.
60 # Names must appear the same way in the individual section as in the union section (ex. HHSP HHSP&...)
61
62 data=euler(c("HHSP"=478, "21st"=430, "Groups"=134, "HHSP&21st"=70,
63             "21st&Groups"=128, "Groups&HHSP"=30, "HHSP&21st&Groups"=27),
64           shape="ellipse")
65
66 grid.newpage()           # starts you off with a clean slate
67
68 plot(data, quantities=T, fill=c("#e8d0b7", "#d9e8b7", "#b7d1e8"), col="white", labels=list(font=7))
69 # quantities=T prints numbers in circles. Fill colors can be hexadecimal. col= determines outline color
70 # labels determines bold/italics/etc and can define size of font
71 |
72 grid.newpage()
73 plot(data, fill=c("#e8d0b7", "#d9e8b7", "#b7d1e8"), col="white", labels=c("", "", ""))
74 # This will create circles with no text. Can also specify labels as something other than
75 # original labels
76
77
78
```

RStudio interface showing R code and a Venn diagram plot.

```
54
55 library(eulerr)
56 library(grid)
57
58 # Here's an example of the format.
59 # Numbers indicate number of items in THAT SECTION of the Venn. NOT total number for that category.
60 # Names must appear the same way in the individual section as in the union section (ex. HHSP HHSP&...)
61
62 data=euler(c("HHSP"=478, "21st"=430, "Groups"=134, "HHSP&21st"=70,
63             "21st&Groups"=128, "Groups&HHSP"=30, "HHSP&21st&Groups"=27),
64           shape="ellipse")
65
66 grid.newpage()           # Starts you off with a clean slate
67
68 plot(data, quantities=T, fill=c("#e8d0b7", "#d9e8b7", "#b7d1e8"), col="white", labels=list(font=7))
69 # quantities=T prints numbers in circles. Fill colors can be hexadecimal. col= determines outline color
70 # labels determines bold/italics/etc and can define size of font
71
72 grid.newpage()
73 plot(data, fill=c("#e8d0b7", "#d9e8b7", "#b7d1e8"), col="white", labels=c("", "", ""))
74 # This will create circles with no text. Can also specify labels as something other than
75 # original labels
76
77
78
```

Console output:

```
R version 4.1.2 (2021-11-01) -- "Bird Hippie"
Copyright (C) 2021 The R Foundation for Statistical Computing
Platform: x86_64-w64-mingw32/x64 (64-bit)

R is free software and comes with ABSOLUTELY NO WARRANTY.
You are welcome to redistribute it under certain conditions.
Type 'license()' or 'licence()' for distribution details.

R is a collaborative project with many contributors.
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in publications.

Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

> library(eulerr)
warning message:
package 'eulerr' was built under R version 4.1.3
> library(grid)
> data=euler(c("HHSP"=478, "21st"=430, "Groups"=134, "HHSP&21st"=70,
+             "21st&Groups"=128, "Groups&HHSP"=30, "HHSP&21st&Groups"=27),
+           shape="ellipse")
>
> grid.newpage()           # starts you off with a clean slate
>
> plot(data, quantities=T, fill=c("#e8d0b7", "#d9e8b7", "#b7d1e8"), col="white", labels=list(font=7))
>
```

Region	Count
HHSP only	478
21st only	430
Groups only	134
HHSP & 21st	70
21st & Groups	128
Groups & HHSP	30
All three (HHSP & 21st & Groups)	27



in THAT SECTION of the venn. NOT total number for that category.
 in the individual section as in the union section (ex. HHSP HHSP&...)

```
), "Groups"=134, "HHSP&21st"=70,
"Groups&HHSP"=30, "HHSP&21st&Groups"=27, "Pe11"=78, "Pe11&21st"=333, "Pe11&21st&Groups"=130,
"Pe11&HHSP"=98, "Pe11&HHSP&21st"=63, "Pe11&HHSP&21st&Groups"=51, "Pe11&HHSP&Groups"=30),
```

ff with a clean slate

```
0b7", "#d9e8b7", "#b7d1e8", "#caa4e0"), col="white", labels=list(font=7))
as. Fill colors can be hexadecimal. col= determines outline color
nd can define size of font
```

```
8b7", "#b7d1e8", "#caa4e0"), col="white", labels=c("", "", "")
text. Can also specify labels as something other than
```

R Script

```
s&HHSP"=30, "HHSP&21st&Groups"=27, "Pe11"=78, "Pe11&21st"=333, "Pe11&21st&Groups"=130,
HHSP"=98, "Pe11&HHSP&21st"=63, "Pe11&HHSP&21st&Groups"=51, "Pe11&HHSP&Groups"=30),
```

ff with a clean slate

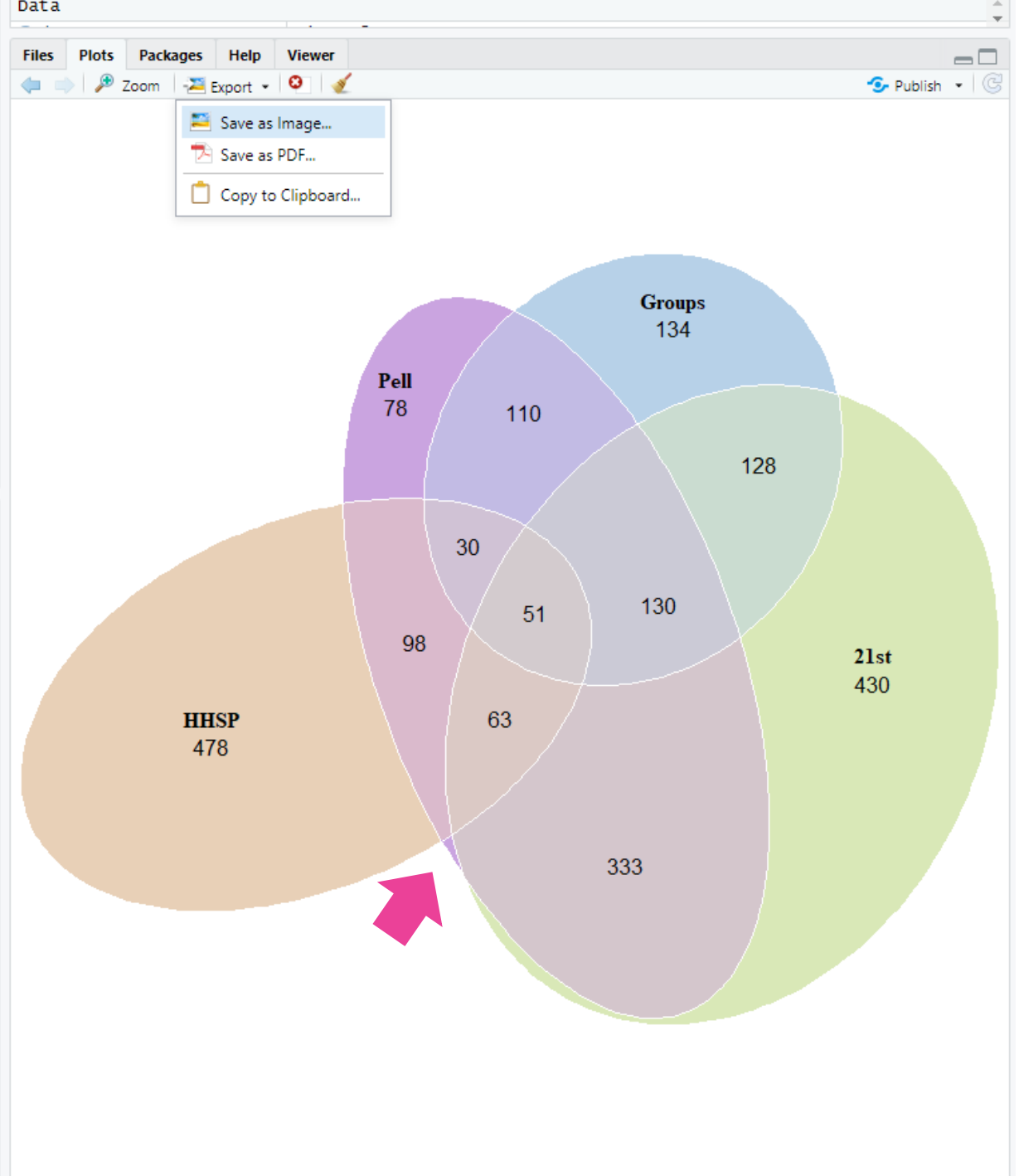
```
0b7", "#d9e8b7", "#b7d1e8", "#caa4e0"), col="white", labels=list(font=7))
as. Fill colors can be hexadecimal. col= determines outline color
nd can define size of font
Groups"=134, "HHSP&21st"=70,
s&HHSP"=30, "HHSP&21st&Groups"=27, "Pe11"=78, "Pe11&21st"=333, "Pe11&21st&Groups"=130,
HHSP"=98, "Pe11&HHSP&21st"=63, "Pe11&HHSP&21st&Groups"=51, "Pe11&HHSP&Groups"=30),
```

ff with a clean slate

```
0b7", "#d9e8b7", "#b7d1e8", "#caa4e0"), col="white", labels=list(font=7))
as. Fill colors can be hexadecimal. col= determines outline color
nd can define size of font
Groups"=134, "HHSP&21st"=70,
s&HHSP"=30, "HHSP&21st&Groups"=27, "Pe11"=78, "Pe11&21st"=333, "Pe11&21st&Groups"=130,
HHSP"=98, "Pe11&HHSP&21st"=63, "Pe11&HHSP&21st&Groups"=51, "Pe11&HHSP&Groups"=30),
```

ff with a clean slate

```
0b7", "#d9e8b7", "#b7d1e8", "#caa4e0"), col="white", labels=list(font=7))
as. Fill colors can be hexadecimal. col= determines outline color
nd can define size of font
```



The screenshot shows the Tableau interface. The **Format Shading** card is on the left, with a pink arrow pointing to the **Worksheet** dropdown menu, which is currently set to **None**. The **Marks** card is in the center, with a pink arrow pointing to the **21st Century: 0** filter. The **Columns** card is on the right, showing a view of a worksheet with the text **877 Pell Grant Only**.

Create a worksheet for each piece of text and make sure they have no background color

Add the Venn image and floating worksheets to your dashboard

Adjust the order to put the image behind the text.

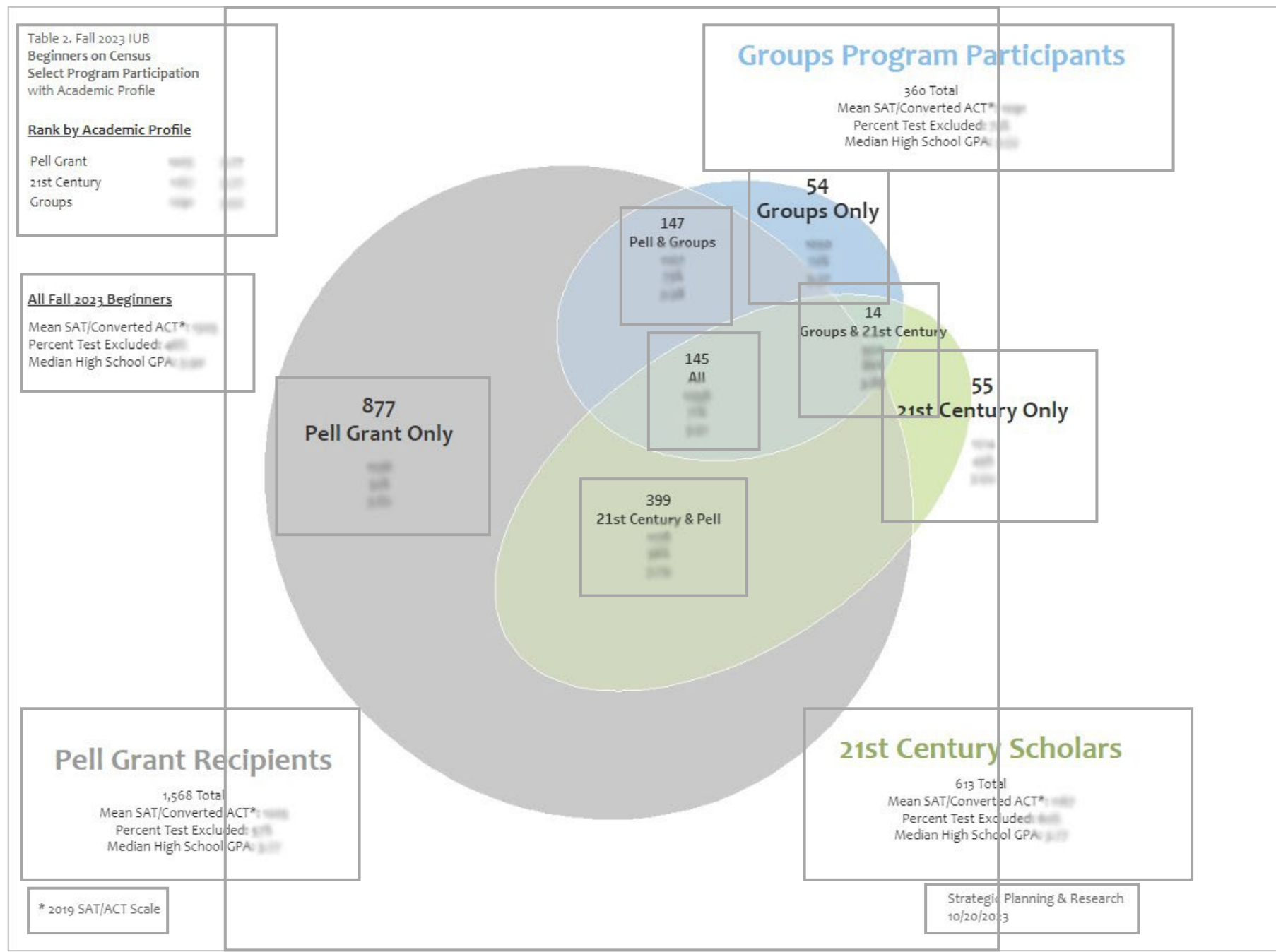
The **Edit Image Object** dialog box is open. The **Insert Image File** button is circled in pink. Below it, the file **venn2.jpeg** is listed with a **Choose** button. The **Options** section has **Fit Image** and **Center Image** checked. The **URL Opened When Image Is Clicked** and **Alt Text** fields are empty. At the bottom, there are **Apply** and **OK** buttons.

A context menu is open over a dashboard item. The menu items are: **Go to Sheet**, **Duplicate Sheet**, **Fit**, **Title** (checked), **Caption**, **Legends**, **Filters**, **Show Page Control**, **View Toolbar**, **Use as Filter**, **Ignore Actions**, **Add Show/Hide Button**, **Floating** (checked), **Floating Order** (highlighted), **Deselect**, **Remove from Dashboard**, **Rename Dashboard Item...**, **Bring to Front**, **Bring Forward**, **Send to Back**, and **Send Backward** (highlighted with a pink arrow).

The **Objects** list is shown. The **Image** option is selected and highlighted with a pink arrow. Below the list, the **Tiled** and **Floating** options are visible, with **Floating** being the active selection.



Type **g** to see a grid while arranging your dashboard!



Conditional Formatting



Excel - Colors

Number of Incoming Credits

Enrolled Students

30+	9,904
15-29	19,733
10-14	11,639
5-9	18,349
1-4	10,160
0 or Unknown	29,781
Grand Total	99,566

The image shows the Excel Conditional Formatting ribbon. The 'Conditional Formatting' dropdown is open, and the 'Color Scales' option is selected. This opens a submenu with several color scale options, including '3-Color Scale', '4-Color Scale', and '5-Color Scale'. The '3-Color Scale' option is highlighted.

The 'New Formatting Rule' dialog box is open, showing the configuration for a 3-Color Scale rule. The 'Format Style' is set to '3-Color Scale'. The 'Type' is 'Lowest Value', the 'Midpoint' is 'Percentile', and the 'Maximum' is 'Highest Value'. The 'Value' is '(Lowest value)', the 'Midpoint' is '50', and the 'Maximum' is '(Highest value)'. The 'Preview' section shows a color scale from light to dark. The 'Theme Colors' and 'Standard Colors' palettes are also visible.

Select a Rule Type:

- Format all cells based on their values
- Format only cells that contain
- Format only top or bottom ranked values
- Format only values that are above or below average
- Format only unique or duplicate values
- Use a formula to determine which cells to format

Edit the Rule Description:

Format all cells based on their values:

Format Style: 3-Color Scale

Type: Lowest Value | Midpoint: Percentile | Maximum: Highest Value

Value: (Lowest value) | 50 | (Highest value)

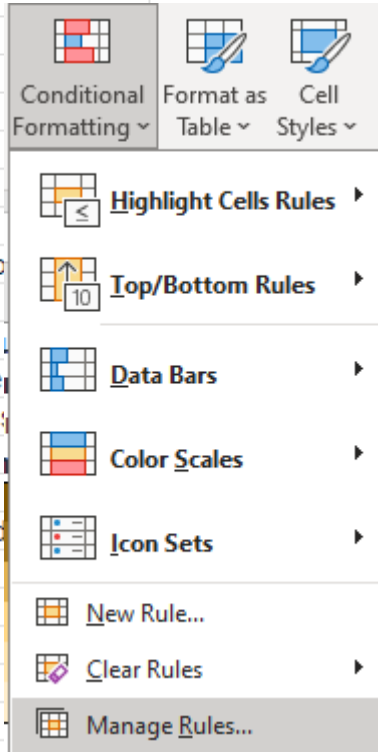
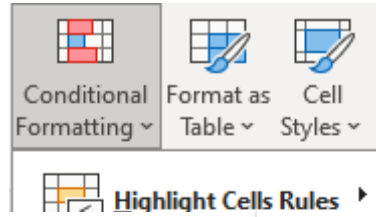
Color: [Color Selection]

Theme Colors

Standard Colors

[More Colors...](#)

Excel - Fonts



Format Cells

Conditional Formatting Rules Manager

Show formatting rules for: Current Selection

New Rule... Edit Rule... Delete Rule Duplicate Rule

Rule (applied in order shown)	Format	Applies to	Stop If True
Formula: =B20>0	AaBbCcYyZz	= \$A\$20:\$C\$28	<input type="checkbox"/>
Formula: =B20<0	AaBbCcYyZz	= \$A\$20:\$C\$28	<input type="checkbox"/>

Preview: AaBbCcYyZz **Format...**

OK Cancel

This is a cloud font and will be downloaded once applied. Once downloaded this font will be available for both printer and screen usage.

Clear

OK Cancel



Excel – Fonts

Bloomington	-11.80%
Columbus	11.10%
East	-22.30%
Fort Wayne	-22.90%
Indianapolis	-10.10%
Kokomo	-13.60%
Northwest	-6.20%
South Bend	-4.70%
Southeast	-10.10%



Bloomington	-12%
Columbus	11%
East	-22%
Fort Wayne	-23%
Indianapolis	-10%
Kokomo	-14%
Northwest	-6%
South Bend	-5%
Southeast	-10%

Tableau- Colors

Number of Incoming Credits	Enrolled Students	Median First Yr IU GPA	Avg. IU Retention to the Second Year (Full Time Students)	Avg. Ret. to any NSC Inst. for a 2nd Year (Full Time Students)	Avg. IU Four Year Graduation Rate (Full Time Students)	Avg. IU Six Year Graduation Rate (Full Time Students)
30+	10,788	3.74	95%	98%	83%	91%
15-29	22,415	3.57	94%	98%	79%	87%
10-14	9,459	3.41	92%	97%	72%	83%
5-9	17,749	3.24	91%	96%	66%	78%
1-4	9,374	3.20	89%	95%	64%	77%
0 or Unknown	29,781	3.11	85%	93%	60%	73%
Grand Total	99,566	3.34	90%	96%	69%	80%

Marks

□ Square

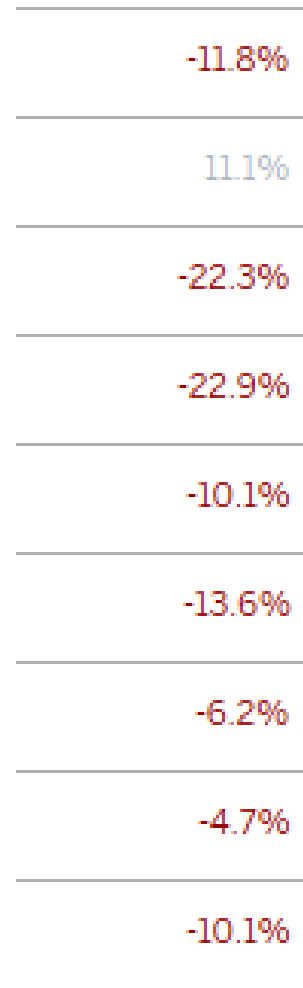
Color Size Label

Detail Tooltip

Measure Values

Measure Values

Tableau Fonts



Marks

Automatic

Color Size Text

Detail Tooltip

AGG(Negative Gap for Table)

AGG(Negative Gap for Table)

Edit Colors [Negative Gap for Table]

Palette: Custom Diverging

-22.9% 22.9%

Stepped Color 2 Steps

Reversed

Use Full Color Range

Include Totals << Advanced


Start: -0.228571429 End: 0.110656103

Center: 0

Reset OK Cancel Apply



Export Text from Tableau

 Send	To	
	Cc	
Subject		

Applications

Applications (42,363) are **up over** 2022 and 2021.

- 42,363 Applications (**+23% over** 2022; **+19% over** 2021)
 - 12,083 domestic residents (**+20% over** 2022; **+4% over** 2021)
 - 26,410 domestic non-residents (**+24% over** 2022; **+24% over** 2021)
 - 3,864 international (**+34% over** 2022; **+37% over** 2021)

Quality is **up**.

- Median HS GPA of 3.89 (**-0.02 from** 2022; **+0.04 over** 2021)
- Mean SAT of 1333 (**-12 points from** 2022; **+9 points over** 2021)
- 11,803 Applications in 1340+ SAT band (**+11% over** 2022; **+20% over** 2021)

Test Optional

- 20,917 Applications (49%) are test excluded (**+2 percentage points over** 2022)

Diversity is **up**.

- 8,547 historically marginalized Applications (**+33% over** 2022; **+24% over** 2021)
 - 2,089 African American/Black Students (**+36% over** 2022; **+22% over** 2021)
 - 4,126 Hispanic/Latino Students (**+31% over** 2022; **+21% over** 2021)
 - 2,278 Students of Two or More Races (**+35% over** 2022; **+33% over** 2021)

Admits

Admits (34,116) are **up over** 2022 and 2021.

- 34,116 Admits (**+17% over** 2022; **+12% over** 2021)
 - 9,205 domestic residents (**+17% over** 2022; even with 2021)
 - 22,187 domestic non-residents (**+16% over** 2022; **+17% over** 2021)

* These are fake numbers!

If you want text to show up in different colors, make a different variable for positive, negative, and zero

TOUT positive

```
if round([Avg TOUT current], 0)-round([Avg TOUT -1], 0)>0 THEN  
round([Avg TOUT current], 0)-round([Avg TOUT -1], 0)  
end
```

The calculation is valid.

TOUT same

```
if round([Avg TOUT current], 0)-round([Avg TOUT -1], 0)=0 THEN  
round([Avg TOUT current], 0)-round([Avg TOUT -1], 0)  
end
```

The calculation is valid.

TOUT negative

```
if round([Avg TOUT current], 0)-round([Avg TOUT -1], 0)<0 THEN  
round([Avg TOUT current], 0)-round([Avg TOUT -1], 0)  
end
```

The calculation is valid.

2 Dependencies ▾ Apply OK

Don't put anything on rows or columns. Just put everything on Text!

Custom format numbers

Put all three versions of the number right together (no spaces!) and set colors for positive, negative, and zero

The screenshot shows the Tableau interface. The 'Columns' and 'Rows' shelves are empty and circled in pink. The 'Marks' shelf contains a 'Funnel' visualization with several measures: Funnel, SUM(TOUT funneled current), SUM(TINC funneled), AVG(TOUT funneled current), AVG(TINC funneled), AGG(TOUT negative), AGG(TOUT positive), and AGG(TOUT same). The 'Edit Label' dialog box is open, showing a text label with a formula for 'Test Optional' and a list of measures. The list of measures is circled in pink.

Columns

Rows

Test Optional

- 3,375 Enrollments (45%) are test excluded (even with 2022)

Edit Label

Candara 11 B I U [Color] [Align] [List] [Insert] [Close]

Test Optional

- <SUM(TOUT funneled current) <Parameters.Funnel> (<AVG(TOUT funneled current)>) are test excluded (<AGG(TOUT positive)><AGG(TOUT same)><AGG(TOUT negative)> : 2022)

Reset Preview OK Cancel Apply

Put all this on a dashboard. There is a limit to how much you can put in one text box, so you will need multiple worksheets.

Use parameters for different points in the funnel.

Applications

Applications (42,363) are **up over 2022 and 2021**.

- 42,363 Applications (**+23% over 2022; +19% over 2021**)
 - 12,083 domestic residents (**+20% over 2022; +4% over 2021**)
 - 26,410 domestic non-residents (**+24% over 2022; +24% over 2021**)
 - 3,864 international (**+34% over 2022; +37% over 2021**)

Quality is mixed.

- Median HS GPA of 3.87 (**-0.01 from 2023; -0.01 from 2022**)
- Mean SAT of 1345 (**+14 points over 2023; +15 points over 2022**)
- 11,803 Applications in 1340+ SAT band (**+11% over 2022; +20% over 2021**)

Test Optional

- 20,917 Applications (49%) are test excluded (**+2 percentage point over 2022**)

Diversity is up.

- 8,547 historically marginalized Applications (**+33% over 2022; +24% over 2021**)
 - 2,089 African American/Black Students (**+36% over 2022; +22% over 2021**)
 - 4,126 Hispanic/Latino Students (**+31% over 2022; +21% over 2021**)
 - 2,278 Students of Two or More Races (**+35% over 2022; +33% over 2021**)

Applications

Storytime!





Story | Layout <

Story 2

New story point

Blank Duplicate

Text

Add a caption

Enrollments

- Enrollments (1,480) are up over 2022 and 2021.
- 7,480 Enrollments (+25 over 2022; +35 over 2021)
- 3,420 domestic residents (+22 over 2022; +15 over 2021)
- 3,932 domestic non-residents (+5 from 2022); +25 over 2021)
- 377 international (+25 over 2022; +57 over 2021)

Quality is up.

- Median HS GPA of 3.89 (+0.01 over 2022; +0.01 over 2021)
- Mean SAT of 1308 (+11 points from 2022; +6 points over 2021)
- 1,916 Enrollments in 1340+ SAT band (+28 from 2022; +18 over 2021)

Text Optional

- 3,875 Enrollments (+493) are test excluded (over with 2022)

Diversity is up.

- 1,422 Historically-marginalized Enrollments (+175 over 2022; +155 over 2021)
- 330 African-American/Black Students (+125 over 2022); +125 over 2021)
- 173 Hispanic/Latino Students (+175 over 2022; +148 over 2021)
- 499 Students of Two or More Races (+475 over 2022; +125 over 2021)

Enrollments

Text

Drag a she

- Drag your DASHBOARD into a new story.
- Set the parameter for your first page.
- Add a blank sheet, drag the dashboard in again, and set the parameter for the second page.

Story | Layout <

Story 2

New story point

Blank Duplicate

Blank

Text

Applications

Applications (42,363) are up over 2022 and 2021.

- 42,363 Applications (+23% over 2022; +23% over 2021)
- 12,083 domestic resident (+23% over 2022; +23% over 2021)
- 26,410 domestic non-resident (+23% over 2022; +23% over 2021)
- 3,864 international (+34% over 2022; +34% over 2021)

Quality is up.

- Median HS GPA of 3.89 (-0.01 over 2022; -0.01 over 2021)
- Mean SAT of 1333 (-12 points over 2022; -12 points over 2021)
- 11,803 Applications in 1340+ SAT band (+11,803 over 2022; +11,803 over 2021)

Publish your
Tableau!

To Export:

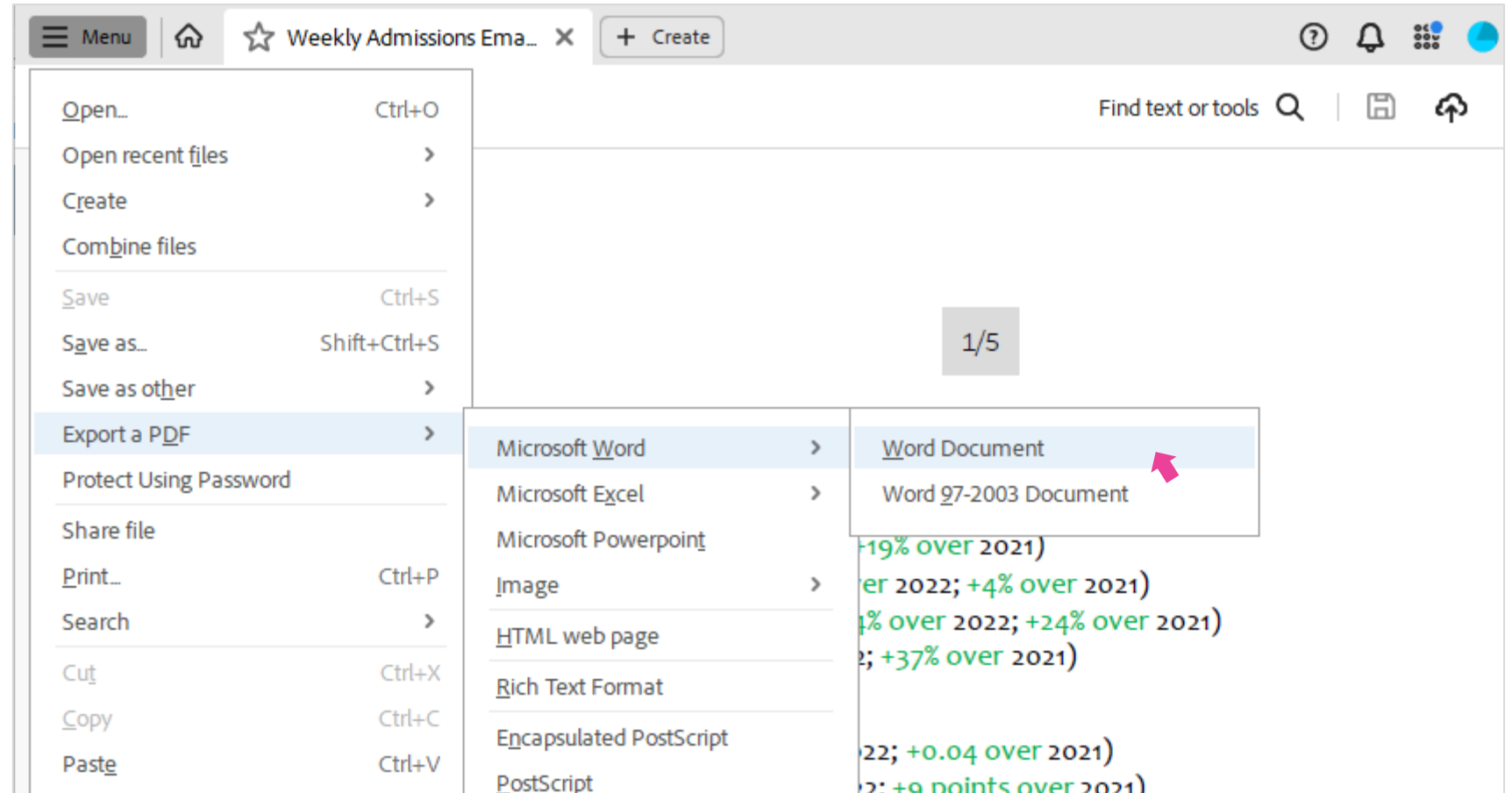
Download as PDF

Set scaling to 100%
to make sure nothing
changes.

The image shows a screenshot of the Tableau interface. At the top, there is a navigation bar with 'Data Sources' and a search icon. Below that, a dark blue bar contains 'Watch', a share icon, and a 'Share' button. A dropdown menu is open, showing options: 'Image', 'Data', 'Crosstab', 'PDF' (highlighted), 'PowerPoint', and 'Tableau Workbook'. In the foreground, a 'Download PDF' dialog box is open. It has a title bar with a close button. The dialog contains three sections: 'Include' with a dropdown set to 'This Story'; 'Scaling' with a dropdown set to '100%' (indicated by a pink arrow); and 'Page Size' (set to 'Letter') and 'Orientation' (set to 'Portrait'). A blue 'Download' button is at the bottom right.

Open in Adobe
(don't just click
on the
downloaded
file!)

Export as Word



What I still have to do manually:

- Remove some extra blank lines
- Remove s when it's just 1

What I don't have to do:

- Type 200 numbers
- Worry that I mistyped one of 200 numbers
- Change over/from/even with
- Change colors

Deposits

Deposits (8,677) are **up over** 2022 and 2021.

- 8,677 Deposits (**+11% over** 2022; **+5% over** 2021)
 - 4,361 domestic residents (**+17% over** 2022; **-1% from** 2021)
 - 3,730 domestic non-residents (**+4% over** 2022; **+8% over** 2021)
 - 586 international (**+13% over** 2022; **+43% over** 2021)

Quality is mixed.

- Median HS GPA of 3.89 (**-0.01 from** 2022; **+0.05 over** 2021)
- Mean SAT of 1310 (**-14 points from** 2022; **+12 points over** 2021)
- 2,251 Deposits in 1340+ SAT band (even with 2022; **+16% over** 2021)

Test Optional

- 4,054 Deposits (47%) are test excluded (**+1 percentage point over** 2022)

Diversity is **up**.

- 1,804 historically marginalized Deposits (**+32% over** 2022; **+15% over** 2021)
 - 434 African American/Black Students (**+27% over** 2022; **+10% over** 2021)
 - 815 Hispanic/Latino Students (**+29% over** 2022; **+14% over** 2021)
 - 551 Students of Two or More Races (**+43% over** 2022; **+21% over** 2021)

Sparklines

The screenshot displays the Microsoft Excel interface with the **Sparkline** ribbon selected. The ribbon includes options for **Edit Data**, **Line**, **Column**, and **Win/Loss** sparkline types. Under the **Show** section, there are checkboxes for **High Point**, **Low Point**, **Negative Points**, **First Point**, **Last Point**, and **Markers**. The **Style** section shows five different line styles and colors. On the right, there are options for **Sparkline Color**, **Marker Color**, **Axis**, **Group**, **Ungroup**, and **Clear**.

The main workspace shows a spreadsheet with the following data:

	2017	2018	2019	2020	2021	2022	2023	Trend
Domestic Resident	4,407	4,660	4,666	4,708	5,129	5,027	5,147	
Domestic Non-Resident	2,906	2,857	3,133	2,945	3,988	4,185	3,957	
International	688	580	492	275	365	524	446	
Total	8,001	8,097	8,291	7,928	9,482	9,736	9,550	

Change the colors, axis, and style

Sparkline Color

Group

Ungroup

Clear

Group

Theme Colors

Standard Colors

More Colors...

Weight

¼ pt

½ pt

¾ pt

1 pt

1½ pt

2¼ pt

3 pt

4½ pt

6 pt

Custom Weight...

Sparkline Color

Marker Color

Negative Points

Markers

High Point

Low Point

First Point

Last Point

Axis

Group

Ungroup

Clear

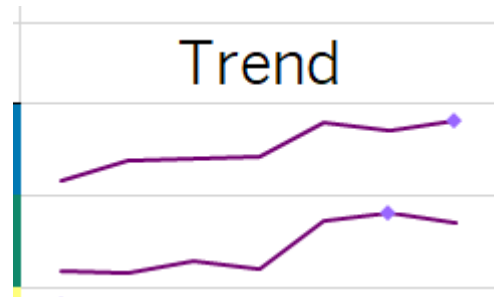
Group

Theme Colors

Standard Colors

More Colors...

2022	2023
5,027	5,140
4,185	3,950
524	440
9,736	9,550



Axis

Group

Ungroup

Clear

Group

Horizontal Axis Options

General Axis Type

Date Axis Type...

Show Axis

Plot Data Right-to-Left

Vertical Axis Minimum Value Options

Automatic for Each Sparkline

Same for All Sparklines

Custom Value...

Vertical Axis Maximum Value Options

Automatic for Each Sparkline

Same for All Sparklines

Custom Value...

File

Home

Insert

Page Layout

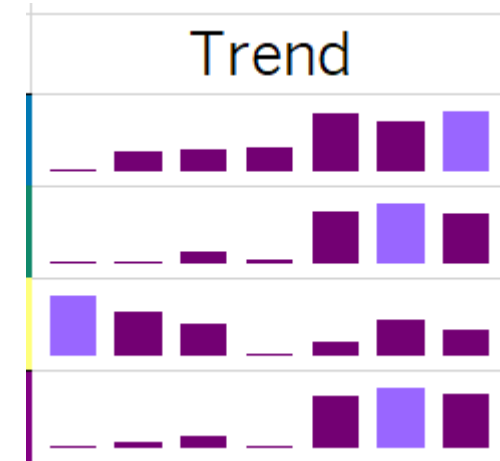
Edit Sparkline Data

Line

Column

Win/Loss

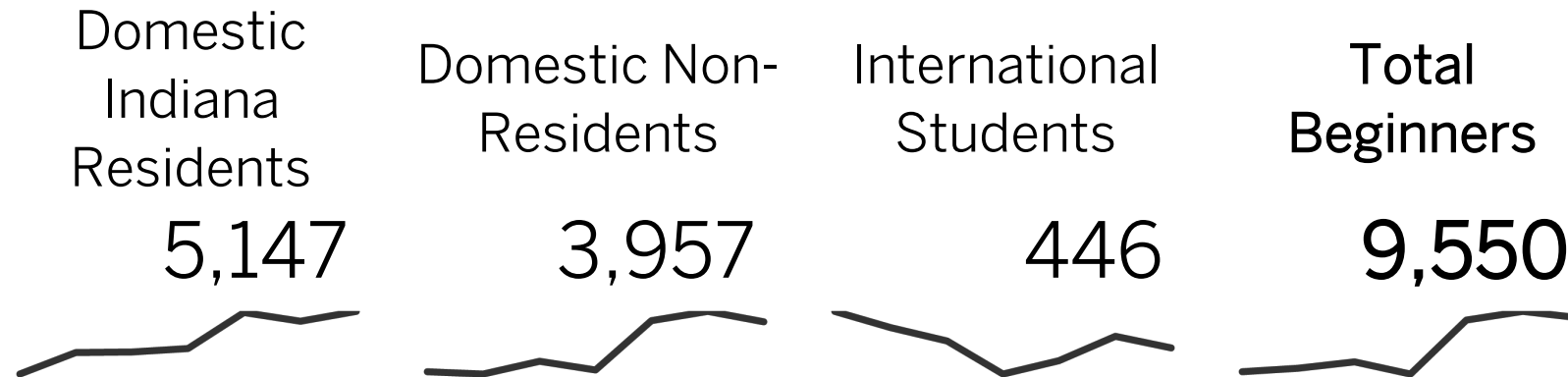
Type





Can be used to provide a number in context


IU Bloomington Beginner Cohort




























EASY Macro Creation

diploma	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Indiana Honors Diploma	4253	44.53	4253	44.53
Indiana Non-Honors Dipl	908	9.51	5161	54.04
Non-Indiana Diploma	4389	45.96	9550	100
	Enroll			
	Sum			
FirstGen				
0	8632			
1	918			
All	9550			
	Enroll			
	Sum			
ReptEthnic				
American Indian/Alaska Native	1			
Asian	1052			
Black/African American	404			
Hispanic/Latino	850			
Missing	47			
NR-Alien	446			
Native Hawaiian/Pacific Island	3			
Two or More Races	615			
White	6132			
All	9550			

- General
- Formulas
- Data
- Proofing
- Save
- Language
- Accessibility
- Advanced
- Customize Ribbon**
- Quick Access Toolbar
- Add-ins
- Trust Center

 Customize the Ribbon.

Choose commands from: 
Popular Commands

-  Add or Remove Filters
-  All Chart Types... [Create Chart]
-  Borders
-  Calculate Now
-  Center
-  Conditional Formatting
-  Copy
-  Custom Sort...
-  Cut
-  Decrease Font Size
-  Delete Cells...
-  Delete Sheet Columns
-  Delete Sheet Rows
-  Email
-  Fill Color
-  Font
-  Font Color
-  Font Size
-  Format Cells
-  Format Painter
-  Freeze Panes
-  Increase Font Size
-  Insert Cells...
-  Insert Function...
-  Insert Picture

Add >>
<< Remove



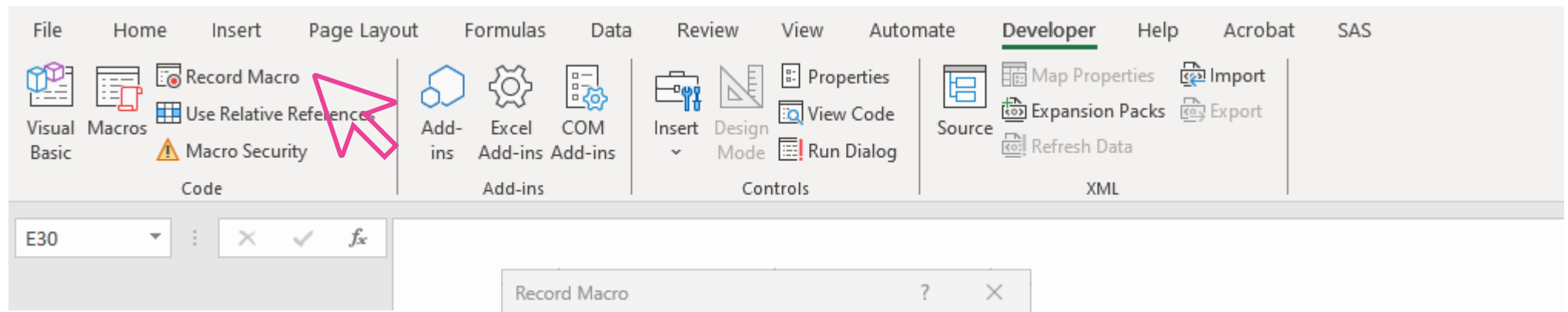
Customize the Ribbon: 
Main Tabs

- > Styles
- > Cells
- > Editing
- > Sensitivity
- > Add-ins
- > Assistance
- > Adobe Acrobat
- > Insert
- > Draw
- > Page Layout
- > Formulas
- > Data
- > Review
- > View
- > Automate
- > Developer
- > Add-ins
- > Help
- > Acrobat
- > SAS

New Tab New Group Rename...

Customizations: Reset  Import/Export 

OK Cancel



Record Macro

Macro name:

Shortcut key:
Ctrl+Shift+

Store macro in:

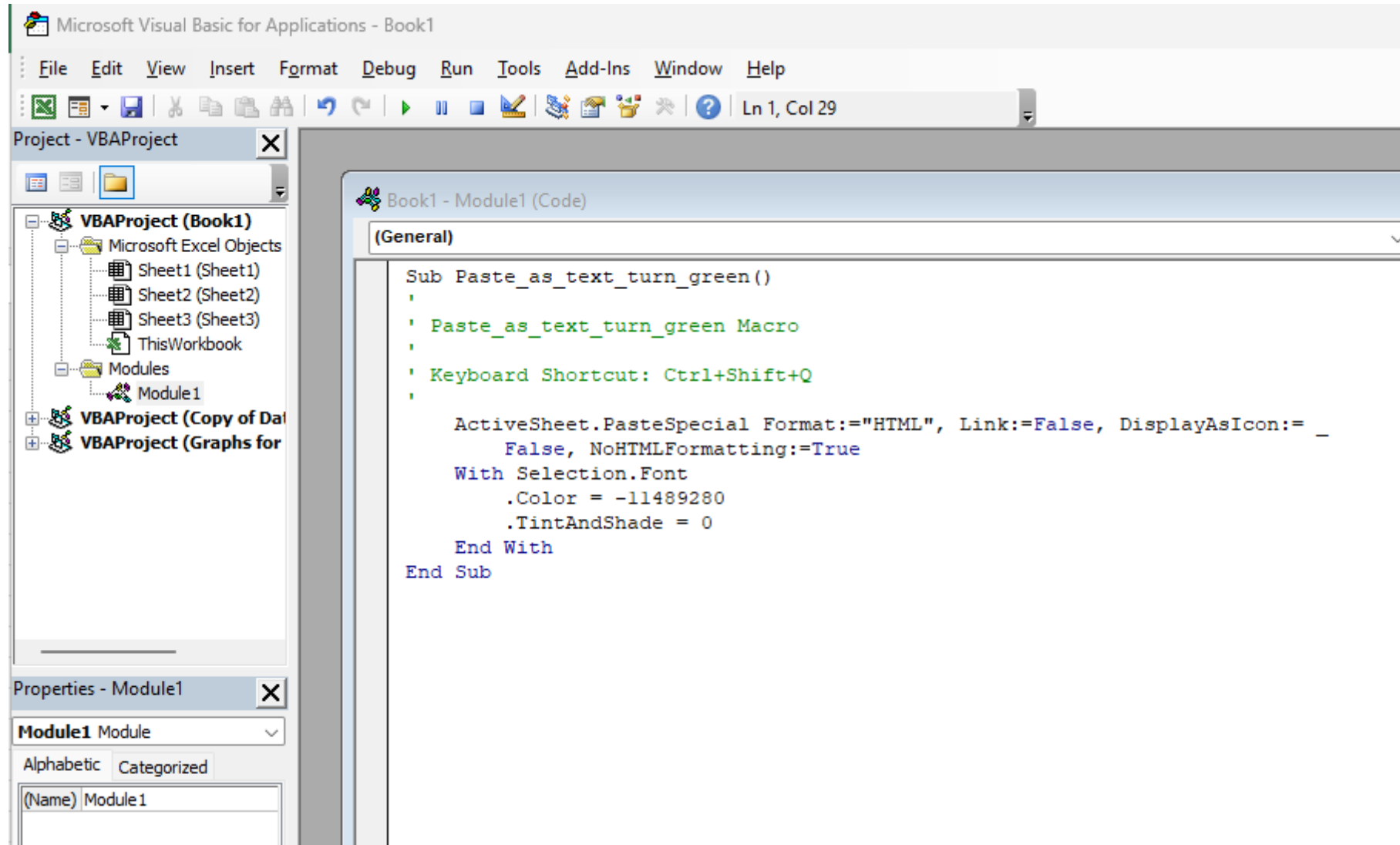
Description:

OK Cancel



	A	B	C	D	E
21					
22					
23	diploma	Frequency	Percent	Cumulative Frequency	Cumulative Percent
24					
25	Indiana Honors Diploma	4253	44.53	4253	44.53
26	Indiana Non-Honors Dipl	908	9.51	5161	54.04
27	Non-Indiana Diploma	4389	45.96	9550	100
28					
29					
30		Enroll			
31		Sum			
32	FirstGen				
33	0	8632			
34	1	918			
35	All	9550			
36					
37		Enroll			
38		Sum			
39	ReptEthnic				
40	American Indian/Alaska Native	1			
41	Asian	1052			
42	Black/African American	404			
43	Hispanic/Latino	850			
44	Missing	47			
45	NR-Alien	446			
46	Native Hawaiian/Pacific Island	3			
47	Two or More Races	615			
48	White	6132			
49	All	9550			

Edit Macro



Spin Buttons!





Excel Options

General
Formulas
Proofing
Save
Language
Advanced
Customize Ribbon
Quick Access Toolbar
Add-ins
Trust Center

Customize the Quick Access Toolbar.

Choose commands from:

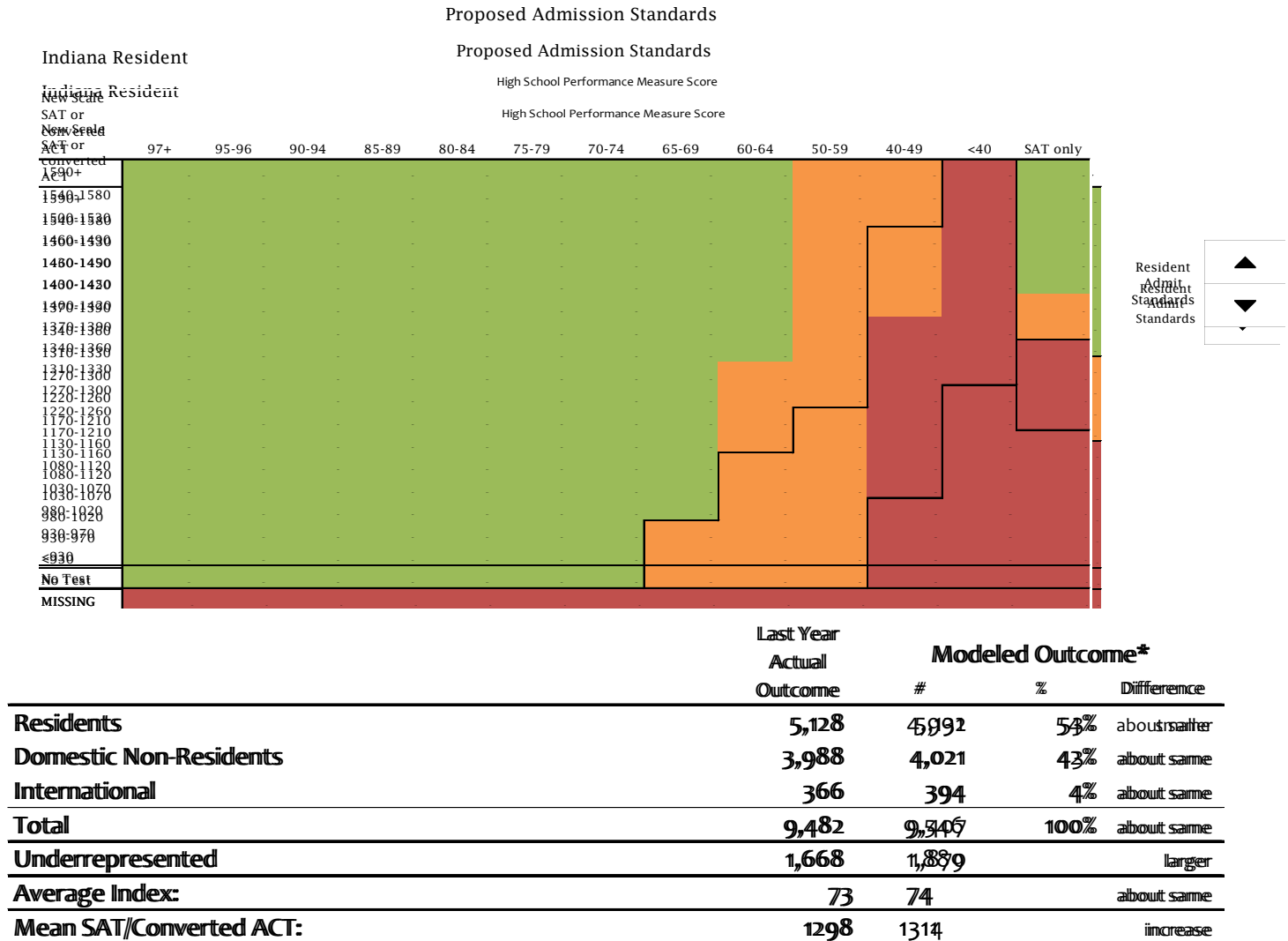
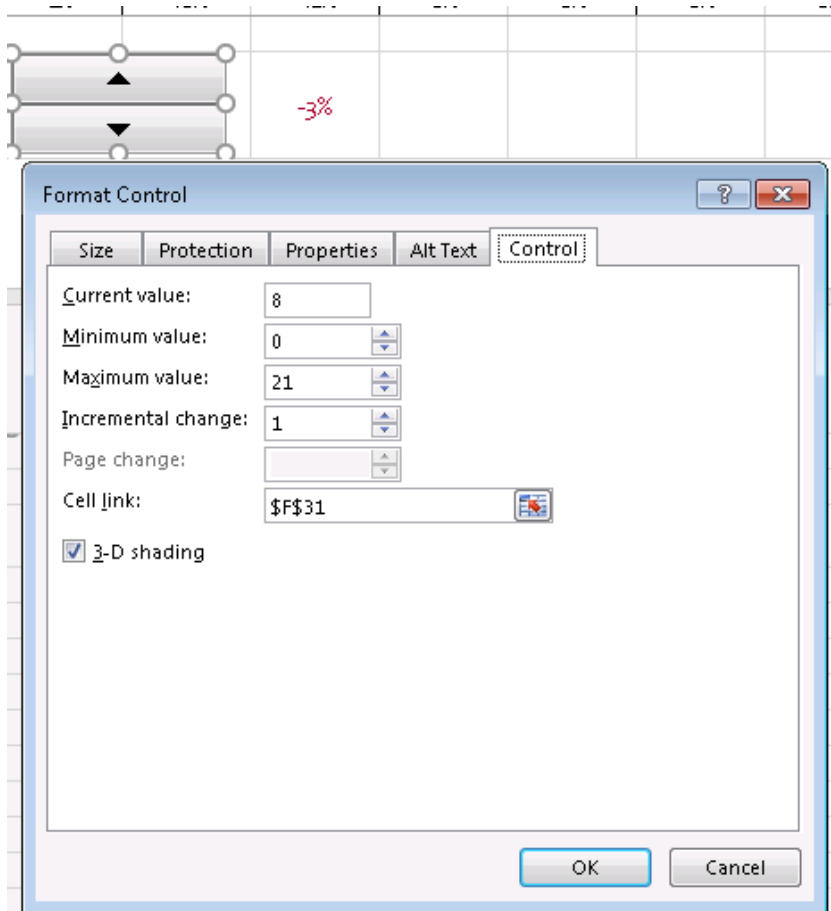
- Sparkline Style
- Sparkline Style
- Sparkline Type
- Sparkline Weight
- Speak Cells
- Speak Cells - Stop Speaking Cells
- Speak Cells by Columns
- Speak Cells by Rows
- Speak Cells on Enter
- Spelling...
- Spin Button (ActiveX Control)
- Spin Button (Form Control)**
- Split Window
- Standard
- Start Inking
- Statistical
- Stop Inking
- Straight Arrow Connector
- Straight Connector
- Strikethrough
- Structures
- Style
- Styles
- Subtotal

Customize Quick Access Toolbar:

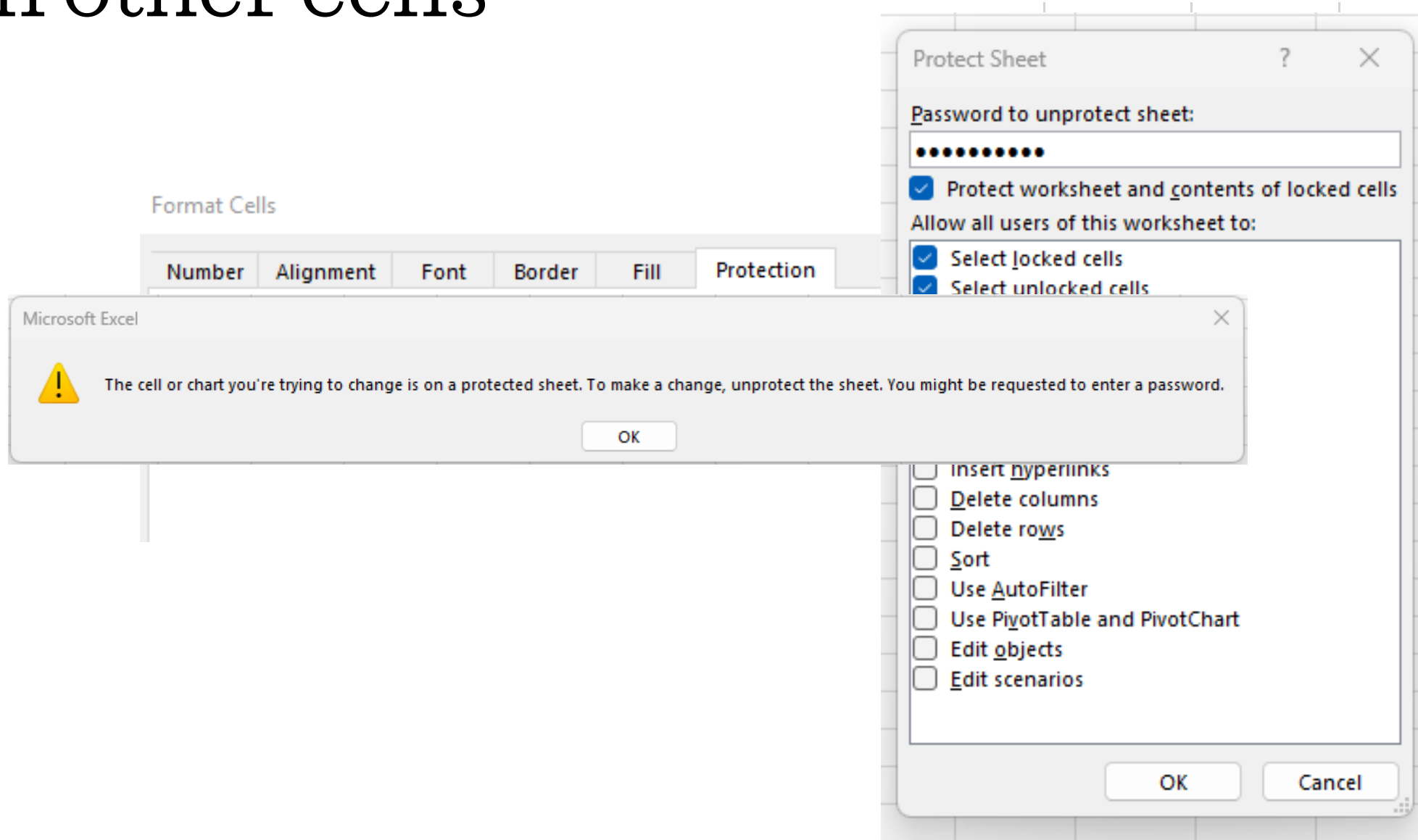
- Save
- Undo
- Redo
- Merge Across
- Spin Button (Form Control)

Customizations:

Interactive Visualization



Lock all other cells





Dynamically Hidden Worksheets

Our Kens and Barbies

Sorted By

All	▼
Mom	
Gender	
Birth Order	
All	



Edit Parameter [Selection] ✕

Name

Properties

Data type: String ▼ Display format: Gender ▼

Current value: Gender ▼ Value when workbook opens: Current value ▼

Allowable values

All List Range

Value	Display As
Mom	Mom
Gender	Gender
Birth Order	Birth Order
All	All
Click to add	

Fixed
 When workbook opens

▼

Sheet Selection ✕

```

if [Selection]='Mom' then 1
elseif [Selection]='Gender' then 2
elseif [Selection]='Birth Order' then 3
elseif [Selection]='All' then 4
end

```

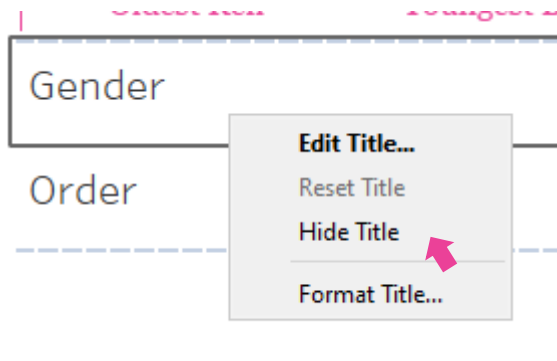
The calculation is valid. 5 Dependencies ▼

- Create parameter to select which worksheet to show.
- Create calculated variable using that parameter.
- Use that variable as a filter on each worksheet.

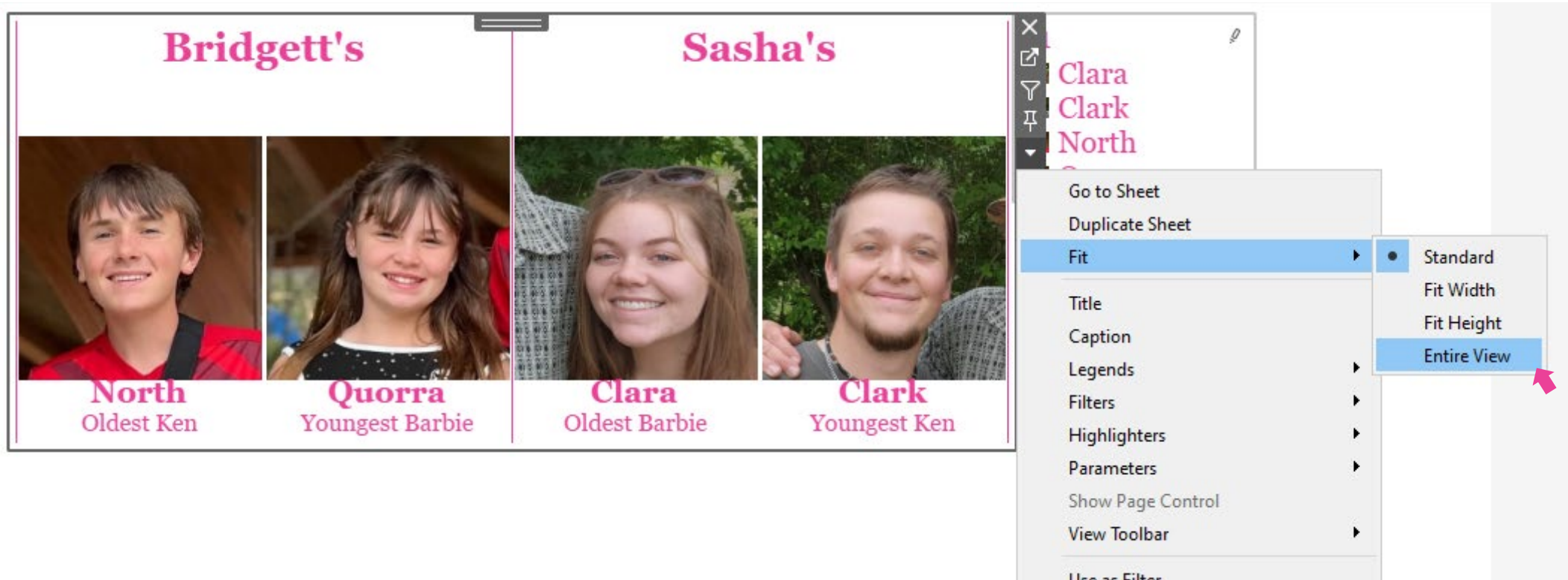
The screenshot shows the Tableau interface. On the left, the 'Filters' shelf contains a pill labeled 'Sheet Selection: 1', which is circled in pink. Below it, the 'Marks' shelf contains pills for 'F1', 'F1', 'Order', and 'Gender'. The main view shows two worksheets: 'Bridgett's' and 'Sasha's'. The 'Bridgett's' worksheet displays photos of North (Oldest Ken) and Quorra (Youngest Barbie). The 'Sasha's' worksheet displays photos of Clara (Oldest Barbie) and Clark (Youngest Ken).

The image shows a dashboard design tool interface. The main workspace displays a grid layout with two columns labeled "Bridgett's" and "Sasha's". Under "Bridgett's" are photos of "North Oldest Ken" and "Quorra Youngest Barbie". Under "Sasha's" are photos of "Clara Oldest Barbie" and "Clark Youngest Ken". The left sidebar contains sections for "Dashboard" (Default, Phone, Device Preview), "Size" (Desktop Browser (1000 x 8...)), "Sheets" (Mom, Gender, Order, All), and "Objects" (Horizontal Container, Vertical Container, Text, Extension). A pink arrow points to the "All" sheet in the Sheets section. A pink oval highlights the "Horizontal Container" and "Vertical Container" options in the Objects section. The top toolbar includes navigation and editing tools. The right sidebar shows a "F1" section with a list of names (Clara, Clark, North, Quorra) and a "Selection" dropdown menu set to "Mom".

Add a container to the dashboard, and put your worksheets in the container.



- Hide the title of every worksheet
- Fit each worksheet to the entire view
- Arrange your title and selection parameter, and remove any keys or filters that you don't want.





Our Kens and Barbies

Sorted By

Mom

Bridgett's

Sasha's



North
Oldest Ken

Quorra
Youngest Barbie

Clara
Oldest Barbie

Clark
Youngest Ken



Our Kens and Barbies

Sorted By

Gender



Barbie

Ken



Quorra
Bridgett's Youngest

Clara
Sasha's Oldest

North
Bridgett's Oldest

Clark
Sasha's Youngest

Our Kens and Barbies

Sorted By

Birth Order

Oldest

Youngest



Clara
Sasha's Barbie



North
Bridgett's Ken



Quorra
Bridgett's Barbie



Clark
Sasha's Ken

Our Kens and Barbies

Sorted By

All

Oldest

Bridgett's



North
Ken

Sasha's



Clara
Barbie

Youngest



Quorra
Barbie



Clark
Ken

