

# Lab 1

**CPS 563 – Data Visualization**

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# Objectives

- Create charts with Excel
- Generate missing data
- Create population pyramid chart

# Open Data.xlsx

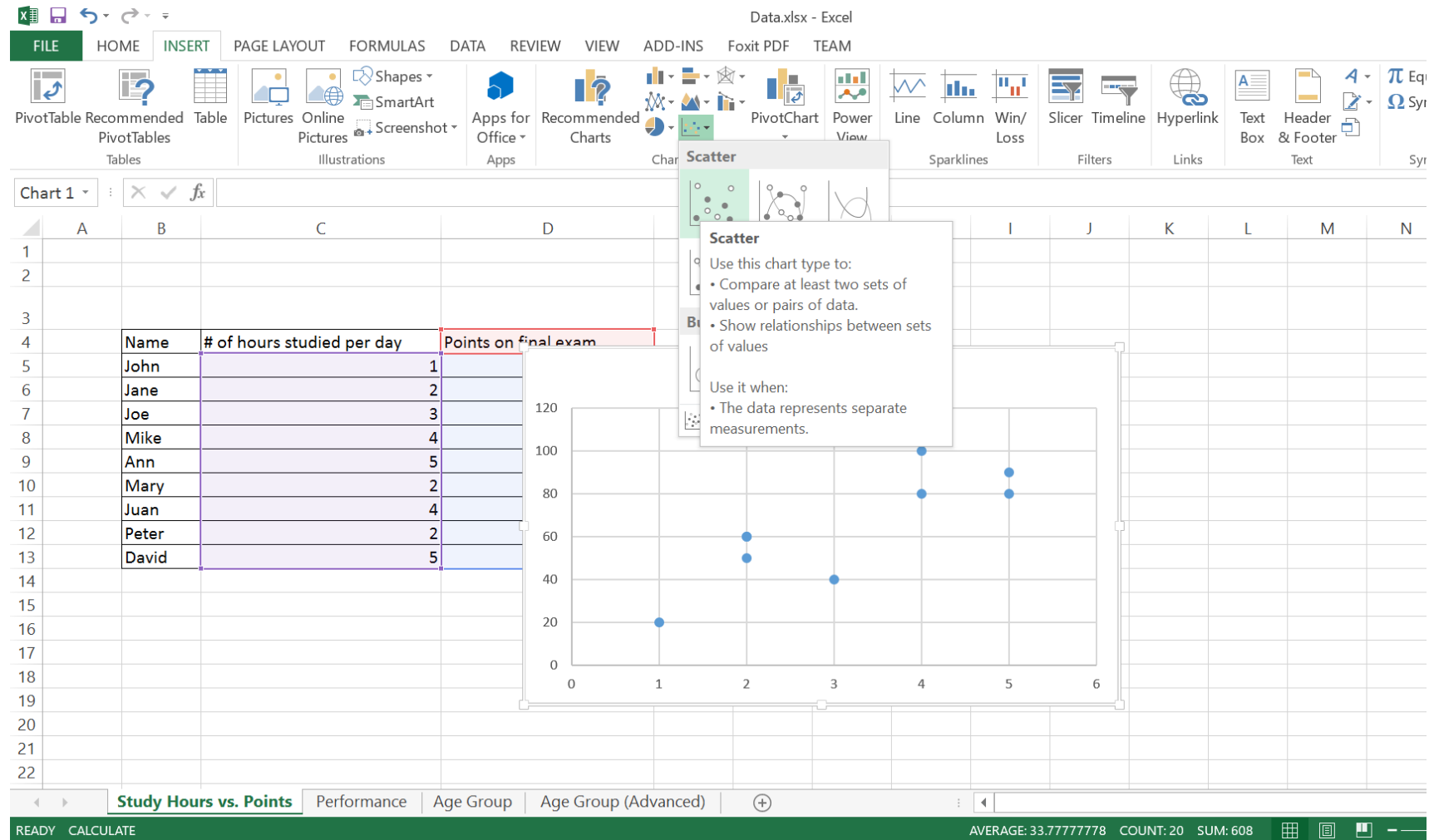
Excel interface showing the 'Data.xlsx' file open in Excel. The ribbon includes FILE, HOME, INSERT, PAGE LAYOUT, FORMULAS, DATA, REVIEW, VIEW, ADD-INS, Foxit PDF, and TEAM. The HOME ribbon is active, showing options for Clipboard, Font, Alignment, Number, Styles, Cells, and Editing.

The spreadsheet displays data for 'Study Hours vs. Points' across columns A to N and rows 1 to 22. The data is organized into a table with the following structure:

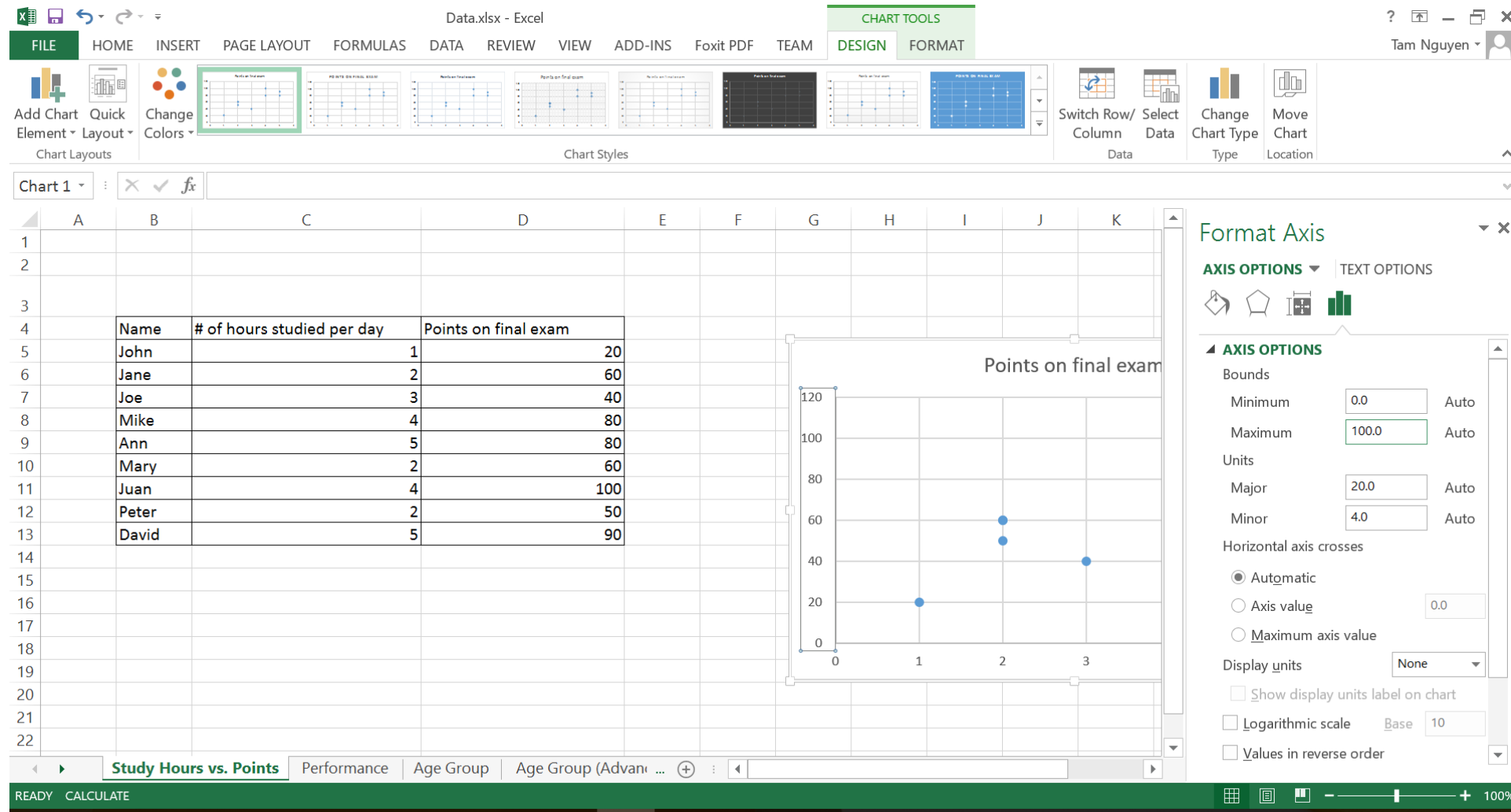
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1														
2														
3														
4		Name	# of hours studied per day	Points on final exam										
5		John	1	20										
6		Jane	2	60										
7		Joe	3	40										
8		Mike	4	80										
9		Ann	5	80										
10		Mary	2	60										
11		Juan	4	100										
12		Peter	2	50										
13		David	5	90										
14														
15														
16														
17														
18														
19														
20														
21														
22														

The bottom status bar shows 'READY' and 'CALCULATE' modes. The sheet name 'Study Hours vs. Points' is visible in the bottom left corner.

# Select data in “Study Hours vs. Points” worksheet



# Change the max points to 100



# Change to “Performance” worksheet

Excel interface showing the 'Performance' worksheet. The ribbon includes FILE, HOME, INSERT, PAGE LAYOUT, FORMULAS, DATA, REVIEW, VIEW, ADD-INS, Foxit PDF, and TEAM. The HOME ribbon is active, showing options for Clipboard, Font, Alignment, Number, Styles, Cells, and Editing. The worksheet contains a table with 14 columns (A-N) and 17 rows (1-17). The data is as follows:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	C
1															
2		Methods	PCA	HS	SF	FT	RFCN	AIM	IT	GBVS	BM	DRFI	MDTS		
3		Fmeasure													
4		Precision	0.79701	0.81537	0.83216	0.82045	0.86544	0.86361	0.82211	0.81849	0.88409	0.78628	0.856924		
5		Recall	0.84618	0.76564	0.81896	0.77362	0.82165	0.78193	0.82853	0.77332	0.74201	0.65566	0.817653		
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															

The 'Performance' worksheet is selected in the bottom tab bar, along with 'Study Hours vs. Points', 'Age Group', and 'Age Group (Advanced)'.

# Compute F-measure

$$F = 2 \cdot \frac{1}{\frac{1}{\text{recall}} + \frac{1}{\text{precision}}} = 2 \cdot \frac{\text{precision} \cdot \text{recall}}{\text{precision} + \text{recall}}$$

# Compute F-measure

Data.xlsx - Excel

Tam Nguyen

FILE HOME INSERT PAGE LAYOUT FORMULAS DATA REVIEW VIEW ADD-INS Foxit PDF TEAM

Clipboard Font Alignment Number Styles Cells Editing

Formula Bar:  $=2*(C4*C5)/(C4+C5)$

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	C
1															
2		Methods	PCA	HS	SF	FT	RFCN	AIM	IT	GBVS	BM	DRFI	MDTS		
3		Fmeasure	$=2*(C4*C5)/(C4+C5)$												
4		Precision	0.79701	0.81537	0.83216	0.82045	0.86544	0.86361	0.82211	0.81849	0.88409	0.78628	0.856924		
5		Recall	0.84618	0.76564	0.81896	0.77362	0.82165	0.78193	0.82853	0.77332	0.74201	0.65566	0.817653		
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															

Study Hours vs. Points Performance Age Group Age Group (Advanced)

EDIT 130%



# Compute F-measure



Excel interface showing the calculation of F-measure for PCA method.

Formula bar:  $=2*(C4*C5)/(C4+C5)$

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1															
2		Methods	PCA	HS	SF	FT	RFCN	AIM	IT	GBVS	BM	DRFI	MDTS		
3		Fmeasure	0.82086												
4		Precision	0.79701	0.81537	0.83216	0.82045	0.86544	0.86361	0.82211	0.81849	0.88409	0.78628	0.856924		
5		Recall	0.84618	0.76564	0.81896	0.77362	0.82165	0.78193	0.82853	0.77332	0.74201	0.65566	0.817653		
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															

Taskbar: Study Hours vs. Points | Performance | Age Group | Age Group (Advanced) | 130%

# Compute F-measure



Excel interface showing the calculation of F-measure in cell C3. The formula bar displays  $=2*(C4*C5)/(C4+C5)$ .

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	C
1															
2		Methods	PCA	HS	SF	FT	RFCN	AIM	IT	GBVS	BM	DRFI	MDTS		
3		Fmeasure	0.82086												
4		Precision	0.79701	0.81537	0.83216	0.82045	0.86544	0.86361	0.82211	0.81849	0.88409	0.78628	0.856924		
5		Recall	0.84618	0.76564	0.81896	0.77362	0.82165	0.78193	0.82853	0.77332	0.74201	0.65566	0.817653		
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															

Taskbar: Study Hours vs. Points | Performance | Age Group | Age Group (Advanced) | 130%

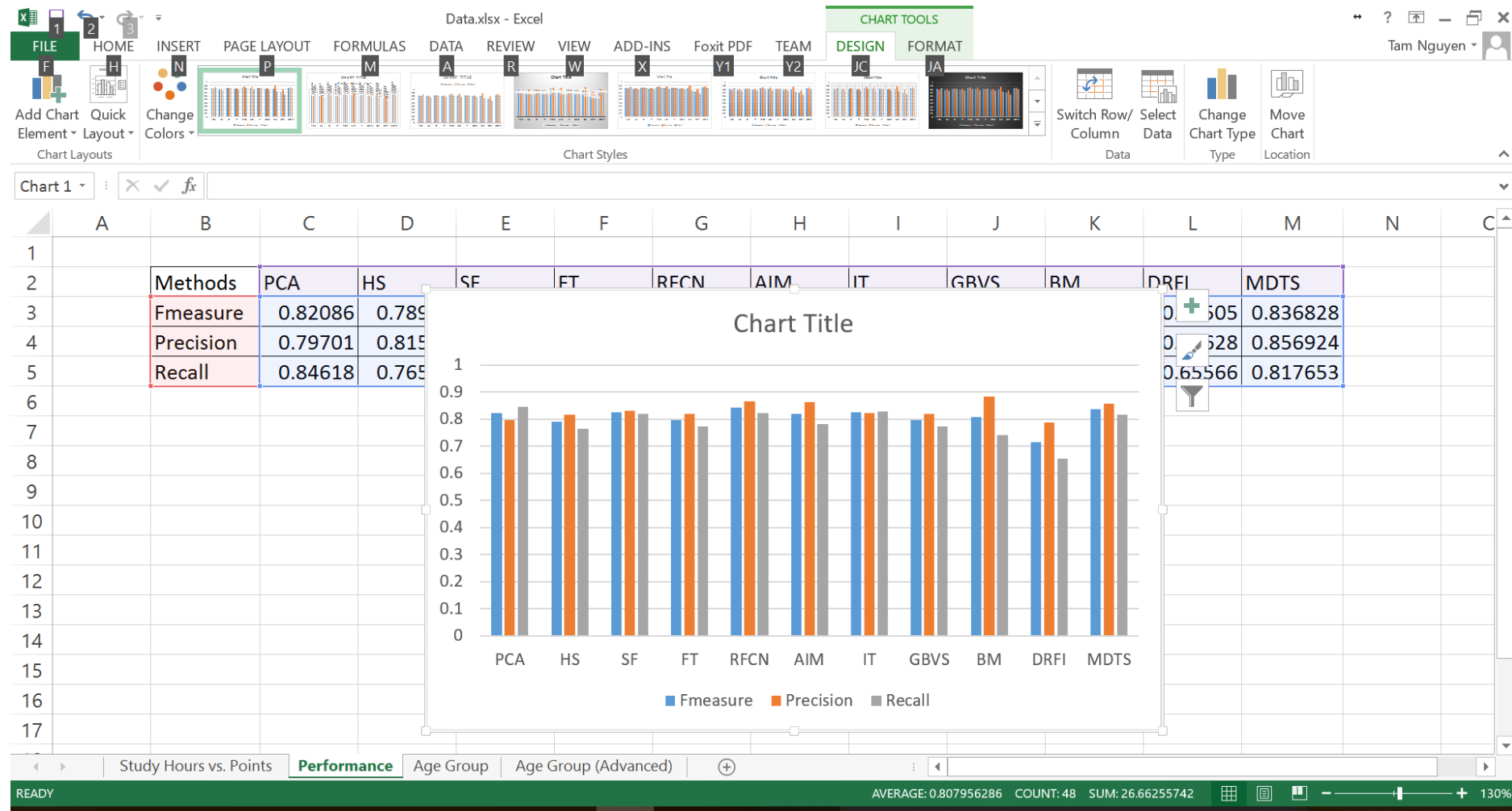
# Compute F-measure

Excel interface showing the calculation of F-measure for various methods. The formula bar displays the formula for cell C3:  $=2*(C4*C5)/(C4+C5)$ .

	A	B	C	D	E	F	G	H	I	J	K	L	M
1													
2		Methods	PCA	HS	SF	FT	RFCN	AIM	IT	GBVS	BM	DRFI	MDTS
3		Fmeasure	0.82086	0.78972	0.82551	0.79635	0.84298	0.82074	0.82531	0.79526	0.80684	0.71505	0.836828
4		Precision	0.79701	0.81537	0.83216	0.82045	0.86544	0.86361	0.82211	0.81849	0.88409	0.78628	0.856924
5		Recall	0.84618	0.76564	0.81896	0.77362	0.82165	0.78193	0.82853	0.77332	0.74201	0.65566	0.817653
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													

Summary statistics at the bottom: AVERAGE: 0.806859857, COUNT: 11, SUM: 8.875458422, 130%

# Plot the bar chart

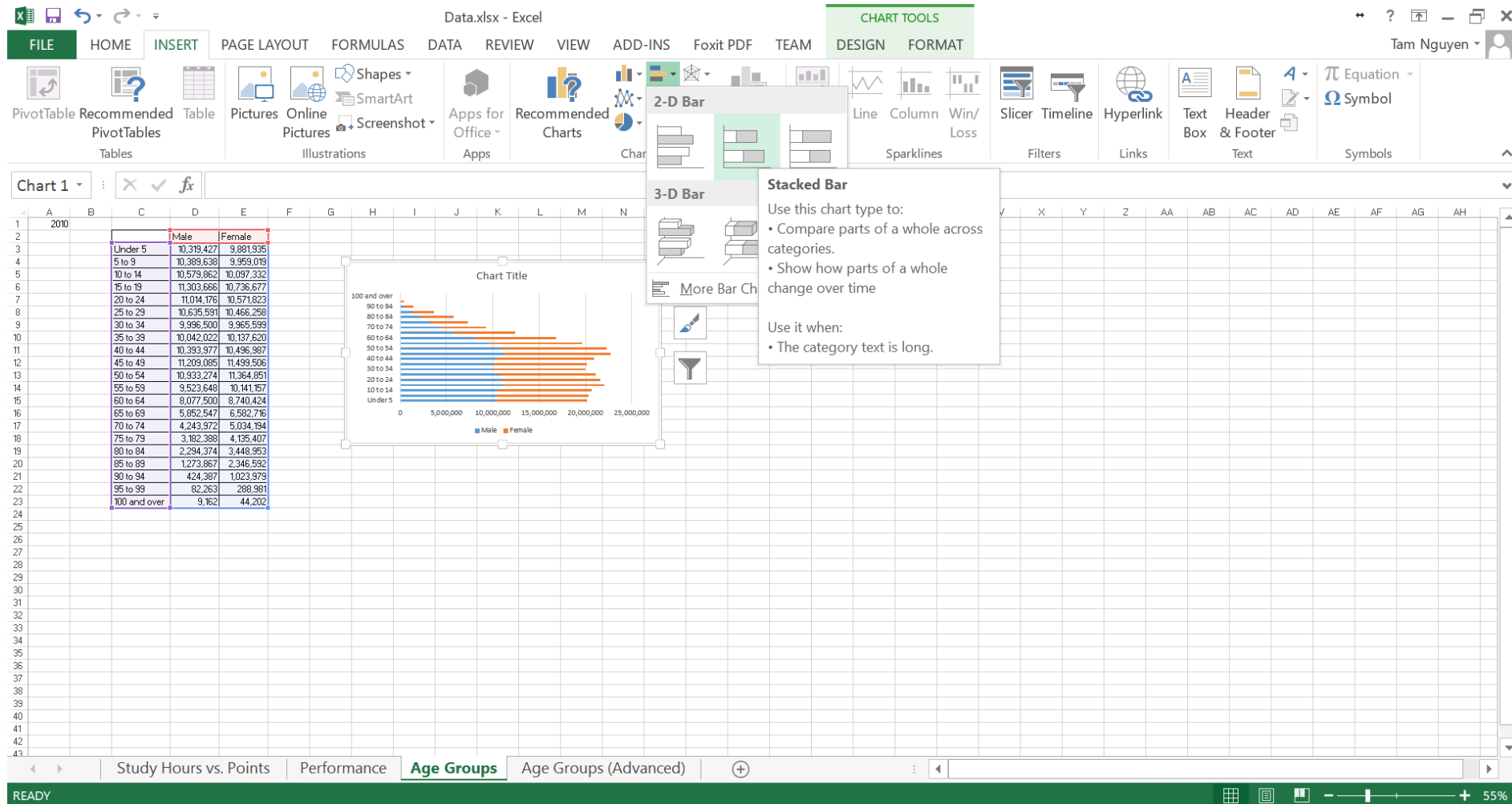


# Change to “Age Groups” worksheet

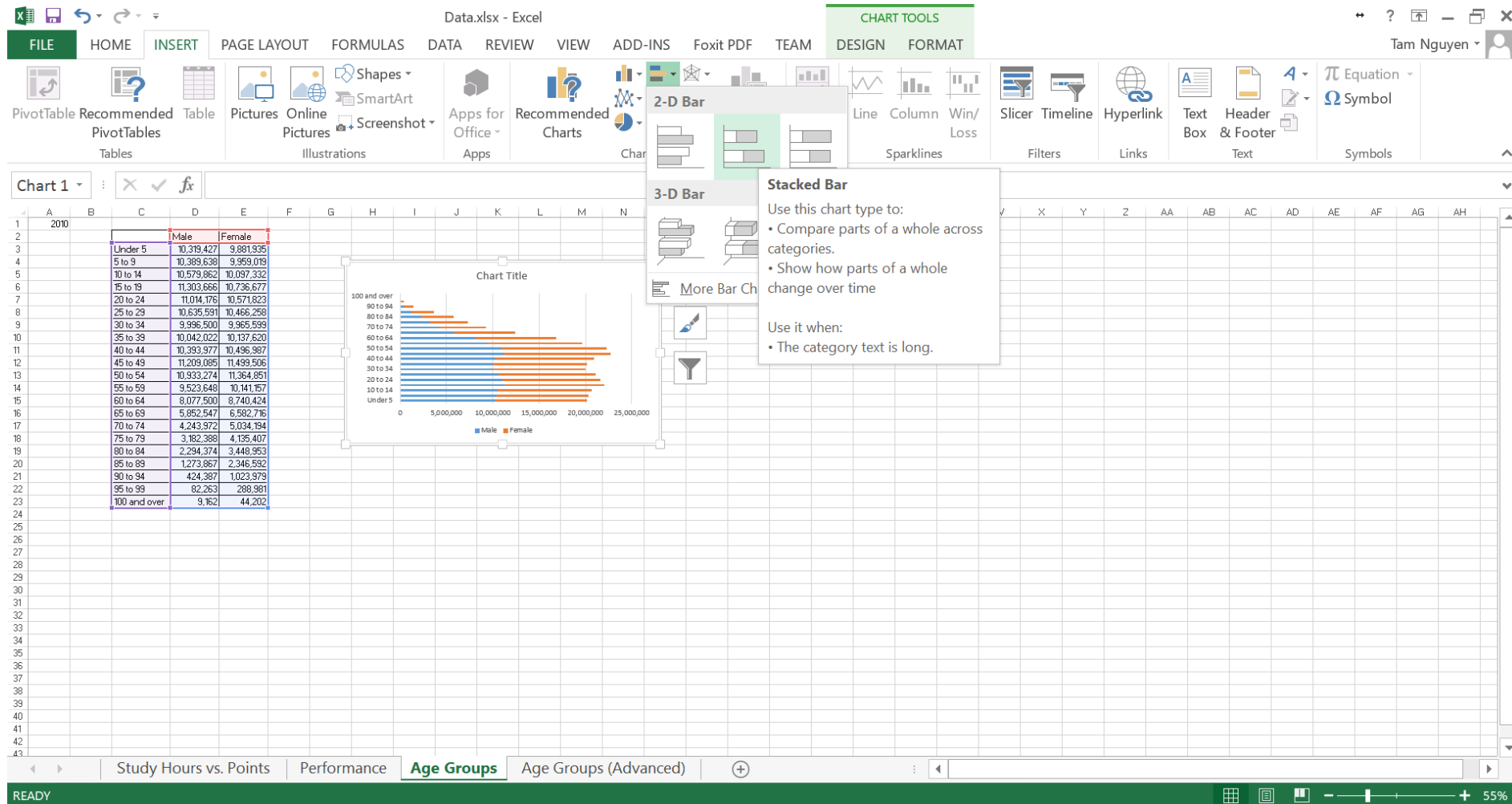
Excel interface showing the "Age Groups" worksheet. The ribbon includes FILE, HOME, INSERT, PAGE LAYOUT, FORMULAS, DATA, REVIEW, VIEW, ADD-INS, Foxit PDF, and TEAM. The worksheet displays data for the year 2010, categorized by age groups and gender.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	2010																		
2				Male	Female														
3			Under 5	10,319,427	9,881,935														
4			5 to 9	10,389,638	9,959,019														
5			10 to 14	10,579,862	10,097,332														
6			15 to 19	11,303,666	10,736,677														
7			20 to 24	11,014,176	10,571,823														
8			25 to 29	10,635,591	10,466,258														
9			30 to 34	9,996,500	9,965,599														
10			35 to 39	10,042,022	10,137,620														
11			40 to 44	10,393,977	10,496,987														
12			45 to 49	11,209,085	11,499,506														
13			50 to 54	10,933,274	11,364,851														
14			55 to 59	9,523,648	10,141,157														
15			60 to 64	8,077,500	8,740,424														
16			65 to 69	5,852,547	6,582,716														
17			70 to 74	4,243,972	5,034,194														
18			75 to 79	3,182,388	4,135,407														
19			80 to 84	2,294,374	3,448,953														
20			85 to 89	1,273,867	2,346,592														
21			90 to 94	424,387	1,023,979														
22			95 to 99	82,263	288,981														
23			100 and over	9,162	44,202														

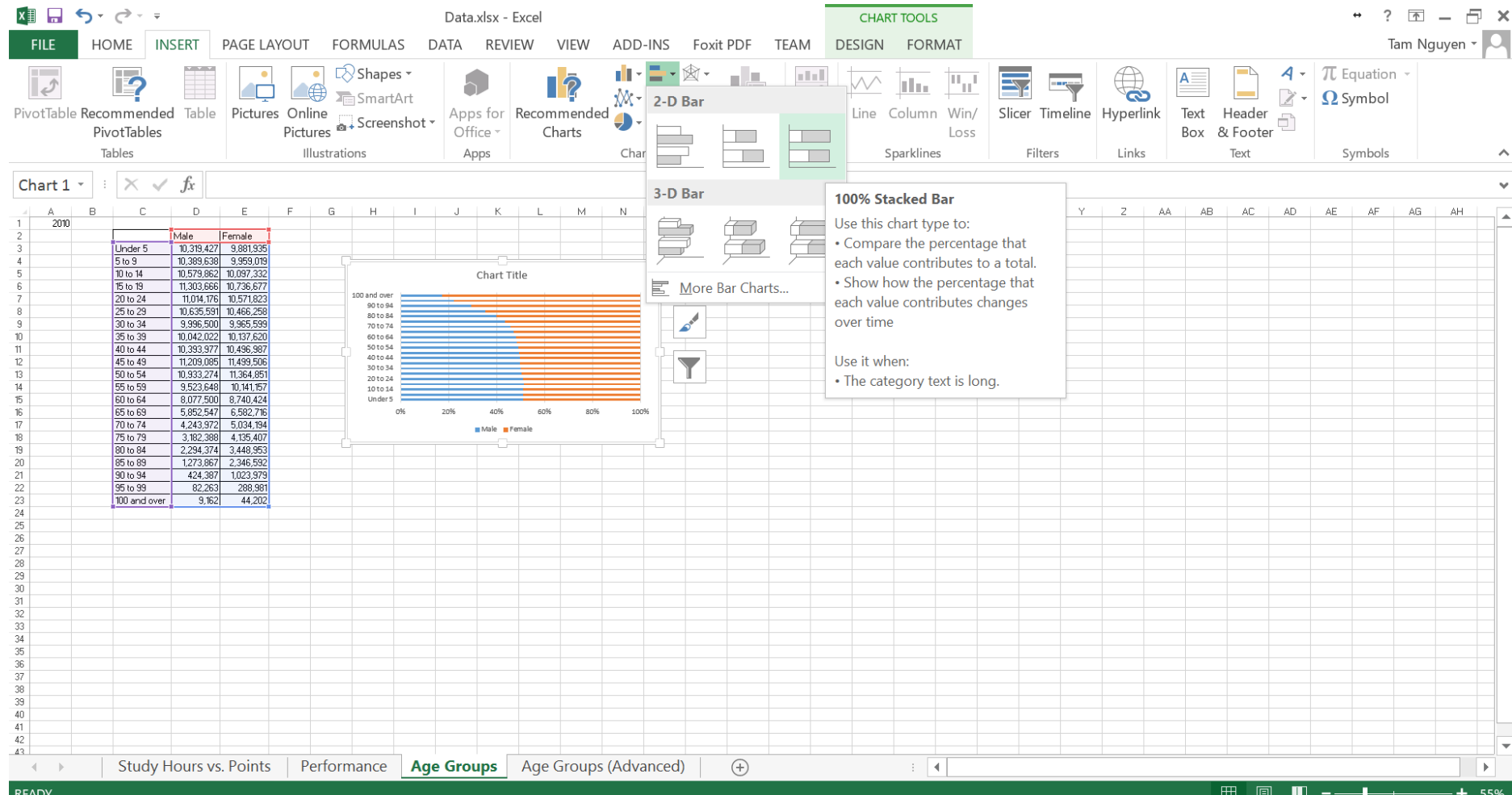
# Create a stacked bar chart from the data



# Create a stacked bar chart from the data



# Create a 100% stacked bar chart from the data





# Change to “Age Groups (Advanced)” worksheet

Excel interface showing the 'Age Groups (Advanced)' worksheet. The ribbon includes FILE, HOME, INSERT, PAGE LAYOUT, FORMULAS, DATA, REVIEW, VIEW, ADD-INS, Foxit PDF, and TEAM. The worksheet contains data for the year 2010, categorized by age groups and gender. The active cell is D6, containing the value 11303666. The status bar at the bottom shows 'READY' and '100%' zoom.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	2010																
2				Male	Female												
3			Under 5	10,319,427	9,881,935												
4			5 to 9	10,389,638	9,959,019												
5			10 to 14	10,579,862	10,097,332												
6			15 to 19	11,303,666	10,736,677												
7			20 to 24	11,014,176	10,571,823												
8			25 to 29	10,635,591	10,466,258												
9			30 to 34	9,996,500	9,965,599												
10			35 to 39	10,042,022	10,137,620												
11			40 to 44	10,393,977	10,496,987												
12			45 to 49	11,209,085	11,499,506												
13			50 to 54	10,933,274	11,364,851												
14			55 to 59	9,523,648	10,141,157												
15			60 to 64	8,077,500	8,740,424												
16			65 to 69	5,852,547	6,582,716												
17			70 to 74	4,243,972	5,034,194												
18			75 to 79	3,182,388	4,135,407												
19			80 to 84	2,294,374	3,448,953												
20			85 to 89	1,273,867	2,346,592												
21			90 to 94	424,387	1,023,979												
22			95 to 99	82,263	288,981												
23			100 and over	9,162	44,202												

# Compute the percentage of each age group

FileHomeInsertPage LayoutFormulasDataReviewViewAdd-InsFoxit PDFTEAM

CutCopyFormat PainterClipboard

Font

Alignment

Number

General

Conditional FormattingFormat as TableCell Styles

InsertDeleteFormatCells

AutoSumFillClearSort & Find & FilterSelect

Editing

SUM: X ✓ fx =D3/SUM(D3:E23)\*100

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	2010																
2				Male	Female	Male (%)	Female (%)										
3			Under 5	10,319,427	9,881,935	=D3/SUM(D3:E23)*100											
4			5 to 9	10,389,638	9,959,019												
5			10 to 14	10,579,862	10,097,332												
6			15 to 19	11,303,666	10,736,677												
7			20 to 24	11,014,176	10,571,823												
8			25 to 29	10,635,591	10,466,258												
9			30 to 34	9,996,500	9,965,599												
10			35 to 39	10,042,022	10,137,620												
11			40 to 44	10,393,977	10,496,987												
12			45 to 49	11,209,085	11,499,506												
13			50 to 54	10,933,274	11,364,851												
14			55 to 59	9,523,648	10,141,157												
15			60 to 64	8,077,500	8,740,424												
16			65 to 69	5,852,547	6,582,716												
17			70 to 74	4,243,972	5,034,194												
18			75 to 79	3,182,388	4,135,407												
19			80 to 84	2,294,374	3,448,953												
20			85 to 89	1,273,867	2,346,592												
21			90 to 94	424,387	1,023,979												
22			95 to 99	82,263	288,981												
23			100 and over	9,162	44,202												

Study Hours vs. PointsPerformanceAge GroupsAge Groups (Advanced)

EDIT

# Compute the percentage of other age groups

Excel interface showing the calculation of percentages for age groups in 2010. The formula bar displays  $=D3/SUM(D3:E23)*100$ .

	A	B	C	D	E	F	G
1	2010						
2				Male	Female	Male (%)	Female (%)
3			Under 5	10,319,427	9,881,935	3.3423728	
4			5 to 9	10,389,638	9,959,019		
5			10 to 14	10,579,862	10,097,332		
6			15 to 19	11,303,666	10,736,677		
7			20 to 24	11,014,176	10,571,823		
8			25 to 29	10,635,591	10,466,258		
9			30 to 34	9,996,500	9,965,599		
10			35 to 39	10,042,022	10,137,620		
11			40 to 44	10,393,977	10,496,987		
12			45 to 49	11,209,085	11,499,506		
13			50 to 54	10,933,274	11,364,851		
14			55 to 59	9,523,648	10,141,157		
15			60 to 64	8,077,500	8,740,424		
16			65 to 69	5,852,547	6,582,716		
17			70 to 74	4,243,972	5,034,194		
18			75 to 79	3,182,388	4,135,407		
19			80 to 84	2,294,374	3,448,953		
20			85 to 89	1,273,867	2,346,592		
21			90 to 94	424,387	1,023,979		
22			95 to 99	82,263	288,981		
23			100 and over	9,162	44,202		

Study Hours vs. Points | Performance | Age Groups | **Age Groups (Advanced)**

# Compute the percentage of other age groups

Excel interface showing a spreadsheet with data for age groups and a formula bar. The formula bar displays  $=D3/SUM(D3:E23)*100$ . The spreadsheet data is as follows:

	A	B	C	D	E	F	G
1	2010						
2				Male	Female	Male (%)	Female (%)
3			Under 5	10,319,427	9,881,935	3.3423728	6.295651537
4			5 to 9	10,389,638	9,959,019	3.6007097	6.771042106
5			10 to 14	10,579,862	10,097,332	3.9448318	7.363677694
6			15 to 19	11,303,666	10,736,677	4.5667997	8.452335587
7			20 to 24	11,014,176	10,571,823	4.8848122	9.09095431
8			25 to 29	10,635,591	10,466,258	5.216287	9.900199568
9			30 to 34	9,996,500	9,965,599	5.46884	10.46241917
10			35 to 39	10,042,022	10,137,620	6.1672561	11.8866476
11			40 to 44	10,393,977	10,496,987	7.2864312	13.96838991
12			45 to 49	11,209,085	11,499,506	9.2060789	17.78700685
13			50 to 54	10,933,274	11,364,851	11.038266	21.3819372
14			55 to 59	9,523,648	10,141,157	12.408547	24.26881584
15			60 to 64	8,077,500	8,740,424	14.149727	27.61970295
16			65 to 69	5,852,547	6,582,716	14.533996	28.73899178
17			70 to 74	4,243,972	5,034,194	15.248139	30.84215969
18			75 to 79	3,182,388	4,135,407	17.151519	36.6346677
19			80 to 84	2,294,374	3,448,953	20.418466	48.21815611
20			85 to 89	1,273,867	2,346,592	23.188906	63.35571426
21			90 to 94	424,387	1,023,979	22.658457	75.44672888
22			95 to 99	82,263	288,981	19.37387	86.72390509
23			100 and over	9,162	44,202	17.168878	99.96117322

**SOMETHING WRONG**

# Update the formula

Excel interface showing the formula bar and a spreadsheet with data for age groups and percentages.

The formula bar displays: `=D3/SUM($D$3:$E$23)*100`

The spreadsheet data is as follows:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	2010																
2				Male	Female	Male (%)	Female (%)										
3			Under 5	10,319,427	9,881,935	=D3/SUM(\$D\$3:\$E\$23)*100											
4			5 to 9	10,389,638	9,959,019	3.60											
5			10 to 14	10,579,862	10,097,332	3.9448318	7.363677694										
6			15 to 19	11,303,666	10,736,677	4.5667997	8.452335587										
7			20 to 24	11,014,176	10,571,823	4.8848122	9.09095431										
8			25 to 29	10,635,591	10,466,258	5.216287	9.900199568										
9			30 to 34	9,996,500	9,965,599	5.46884	10.46241917										
10			35 to 39	10,042,022	10,137,620	6.1672561	11.8866476										
11			40 to 44	10,393,977	10,496,987	7.2864312	13.96838991										
12			45 to 49	11,209,085	11,499,506	9.2060789	17.78700685										
13			50 to 54	10,933,274	11,364,851	11.038266	21.3819372										
14			55 to 59	9,523,648	10,141,157	12.408547	24.26881584										
15			60 to 64	8,077,500	8,740,424	14.149727	27.61970295										
16			65 to 69	5,852,547	6,582,716	14.533996	28.73899178										
17			70 to 74	4,243,972	5,034,194	15.248139	30.84215969										
18			75 to 79	3,182,388	4,135,407	17.151519	36.6346677										
19			80 to 84	2,294,374	3,448,953	20.418466	48.21815611										
20			85 to 89	1,273,867	2,346,592	23.188906	63.35571426										
21			90 to 94	424,387	1,023,979	22.658457	75.44672888										
22			95 to 99	82,263	288,981	19.37387	86.72390509										
23			100 and over	9,162	44,202	17.168878	99.96117322										

The bottom status bar shows the active sheet is "Age Groups (Advanced)".

# Update the formula

Excel ribbon: FILE, HOME, INSERT, PAGE LAYOUT, FORMULAS, DATA, REVIEW, VIEW, ADD-INS, Foxit PDF, TEAM. User: Tam Nguyen.

Formula bar:  $=D3/SUM($D$3:$E$23)*100$

	A	B	C	D	E	F	G
1	2010						
2				Male	Female	Male (%)	Female (%)
3			Under 5	10,319,427	9,881,935	3.342373	3.20067298
4			5 to 9	10,389,638	9,959,019	3.365114	3.22563981
5			10 to 14	10,579,862	10,097,332	3.426725	3.27043819
6			15 to 19	11,303,666	10,736,677	3.661159	3.47751649
7			20 to 24	11,014,176	10,571,823	3.567396	3.42412171
8			25 to 29	10,635,591	10,466,258	3.444776	3.38993012
9			30 to 34	9,996,500	9,965,599	3.23778	3.22777102
10			35 to 39	10,042,022	10,137,620	3.252524	3.28348713
11			40 to 44	10,393,977	10,496,987	3.366519	3.39988298
12			45 to 49	11,209,085	11,499,506	3.630525	3.72459018
13			50 to 54	10,933,274	11,364,851	3.541193	3.6809766
14			55 to 59	9,523,648	10,141,157	3.084627	3.28463273
15			60 to 64	8,077,500	8,740,424	2.616232	2.83094747
16			65 to 69	5,852,547	6,582,716	1.895589	2.13208458
17			70 to 74	4,243,972	5,034,194	1.374586	1.63053174
18			75 to 79	3,182,388	4,135,407	1.030748	1.33942243
19			80 to 84	2,294,374	3,448,953	0.743128	1.11708594
20			85 to 89	1,273,867	2,346,592	0.412594	0.76004078
21			90 to 94	424,387	1,023,979	0.137455	0.33165791
22			95 to 99	82,263	288,981	0.026644	0.09359844
23			100 and over	9,162	44,202	0.002967	0.01431664

Worksheet tabs: Study Hours vs. Points, Performance, Age Groups, Age Groups (Advanced). Status bar: AVERAGE: 2.380952381, COUNT: 42, SUM: 100, 85%.

# Update the formula

Excel interface showing the formula bar and the spreadsheet data.

Formula Bar: `=E3/SUM($D$3:$E$23)*-100`

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	2010																			
2				Male	Female	Male (%)	Female (%)													
3			Under 5	10,319,427	9,881,935	3.342373	=E3/SUM(\$D\$3:\$E\$23)*-100													
4			5 to 9	10,389,638	9,959,019	3.365114	3.22563981													
5			10 to 14	10,579,862	10,097,332	3.426725	3.27043819													
6			15 to 19	11,303,666	10,736,677	3.661159	3.47751649													
7			20 to 24	11,014,176	10,571,823	3.567396	3.42412171													
8			25 to 29	10,635,591	10,466,258	3.444776	3.38993012													
9			30 to 34	9,996,500	9,965,599	3.23778	3.22777102													
10			35 to 39	10,042,022	10,137,620	3.252524	3.28348713													
11			40 to 44	10,393,977	10,496,987	3.366519	3.39988298													
12			45 to 49	11,209,085	11,499,506	3.630525	3.72459018													
13			50 to 54	10,933,274	11,364,851	3.541193	3.6809766													
14			55 to 59	9,523,648	10,141,157	3.084627	3.28463273													
15			60 to 64	8,077,500	8,740,424	2.616232	2.83094747													
16			65 to 69	5,852,547	6,582,716	1.895589	2.13208458													
17			70 to 74	4,243,972	5,034,194	1.374586	1.63053174													
18			75 to 79	3,182,388	4,135,407	1.030748	1.33942243													
19			80 to 84	2,294,374	3,448,953	0.743128	1.11708594													
20			85 to 89	1,273,867	2,346,592	0.412594	0.76004078													
21			90 to 94	424,387	1,023,979	0.137455	0.33165791													
22			95 to 99	82,263	288,981	0.026644	0.09359844													
23			100 and over	9,162	44,202	0.002967	0.01431664													

Worksheet tabs: Study Hours vs. Points, Performance, Age Groups, Age Groups (Advanced)

# Update the values

Excel interface showing the formula bar and the spreadsheet data.

Formula Bar:  $=E3/SUM(\$D\$3:\$E\$23)*-100$

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	2010																			
2				Male	Female	Male (%)	Female (%)													
3			Under 5	10,319,427	9,881,935	3.342373	-3.200673													
4			5 to 9	10,389,638	9,959,019	3.365114	-3.2256398													
5			10 to 14	10,579,862	10,097,332	3.426725	-3.2704382													
6			15 to 19	11,303,666	10,736,677	3.661159	-3.4775165													
7			20 to 24	11,014,176	10,571,823	3.567396	-3.4241217													
8			25 to 29	10,635,591	10,466,258	3.444776	-3.3899301													
9			30 to 34	9,996,500	9,965,599	3.23778	-3.227771													
10			35 to 39	10,042,022	10,137,620	3.252524	-3.2834871													
11			40 to 44	10,393,977	10,496,987	3.366519	-3.399883													
12			45 to 49	11,209,085	11,499,506	3.630525	-3.7245902													
13			50 to 54	10,933,274	11,364,851	3.541193	-3.6809766													
14			55 to 59	9,523,648	10,141,157	3.084627	-3.2846327													
15			60 to 64	8,077,500	8,740,424	2.616232	-2.8309475													
16			65 to 69	5,852,547	6,582,716	1.895589	-2.1320846													
17			70 to 74	4,243,972	5,034,194	1.374586	-1.6305317													
18			75 to 79	3,182,388	4,135,407	1.030748	-1.3394224													
19			80 to 84	2,294,374	3,448,953	0.743128	-1.1170859													
20			85 to 89	1,273,867	2,346,592	0.412594	-0.7600408													
21			90 to 94	424,387	1,023,979	0.137455	-0.3316579													
22			95 to 99	82,263	288,981	0.026644	-0.0935984													
23			100 and over	9,162	44,202	0.002967	-0.0143166													

Navigation pane: Study Hours vs. Points | Performance | Age Groups | **Age Groups (Advanced)**

Status bar: AVERAGE: -2.420921233 COUNT: 21 SUM: -50.8393459 85%



# Create the chart for both gender groups

The screenshot shows the Microsoft Excel interface with the 'Data.xlsx' file open. The 'INSERT' tab is active, and the 'Charts' group is expanded. The 'More Column Charts...' button is highlighted with a red rectangle. A tooltip is visible, explaining that clicking this button opens the 'Insert Chart' dialog to see previews of data in various column chart types.

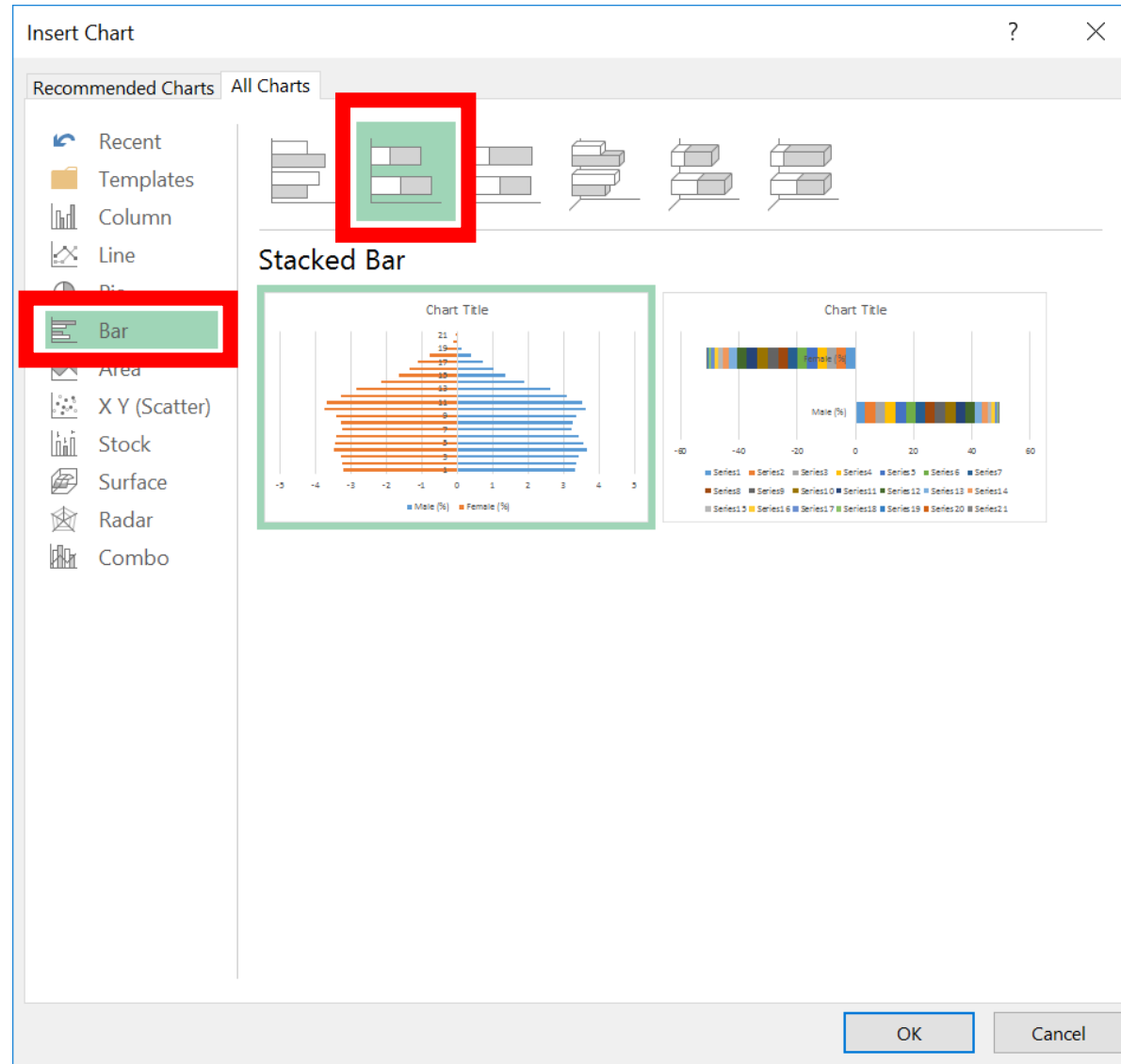
**Male (%)**

	Male	Female	Male (%)	Female (%)
Under 5	10,319,427	9,881,935	3.342373	-3.200673
5 to 9	10,389,638	9,959,019	3.365114	-3.2256398
10 to 14	10,579,862	10,097,332	3.426725	-3.2704382
15 to 19	11,303,666	10,736,677	3.661159	-3.4775165
20 to 24	11,014,176	10,571,823	3.567396	-3.4241217
25 to 29	10,635,591	10,466,258	3.444776	-3.3899301
30 to 34	9,996,500	9,965,599	3.23778	-3.227771
35 to 39	10,042,022	10,137,620	3.252524	-3.2834871
40 to 44	10,393,977	10,496,987	3.366519	-3.399883
45 to 49	11,209,085	11,499,506	3.630525	-3.7245902
50 to 54	10,933,274	11,364,851	3.541193	-3.6809766
55 to 59	9,523,648	10,141,157	3.084627	-3.2846327
60 to 64	8,077,500	8,740,424	2.616232	-2.8309475
65 to 69	5,852,547	6,582,716	1.895589	-2.1320846
70 to 74	4,243,972	5,034,194	1.374586	-1.6305317
75 to 79	3,182,388	4,135,407	1.030748	-1.3394224
80 to 84	2,294,374	3,448,953	0.743128	-1.1170859
85 to 89	1,273,867	2,346,592	0.412594	-0.7600408
90 to 94	424,387	1,023,979	0.137455	-0.3316579
95 to 99	82,263	288,981	0.026644	-0.0935984
100 and over	9,162	44,202	0.002967	-0.0143166

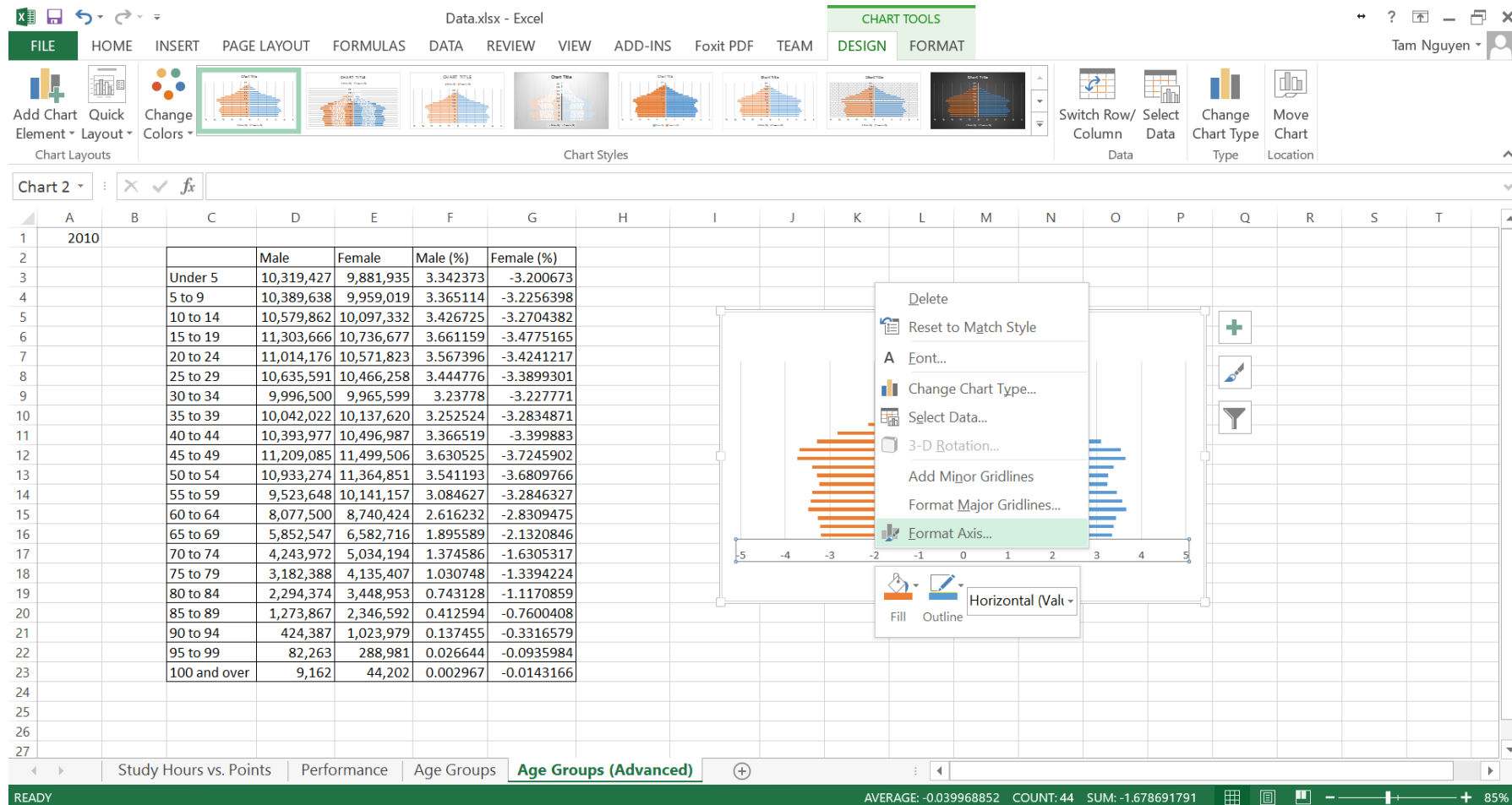
**Age Groups (Advanced)**

READY | AVERAGE: -0.039968852 | COUNT: 44 | SUM: -1.678691791 | 85%

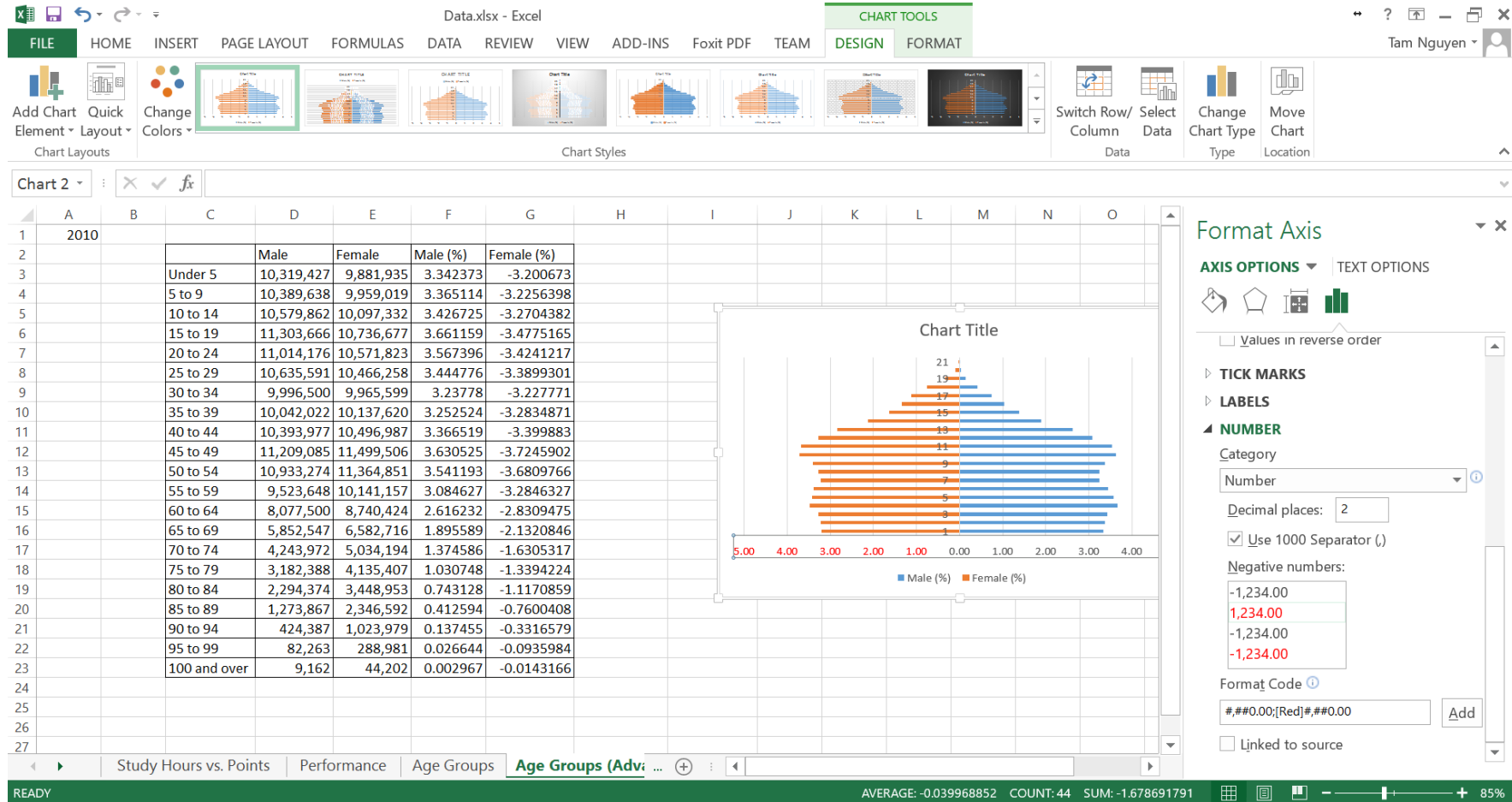
## Create the chart for both gender groups



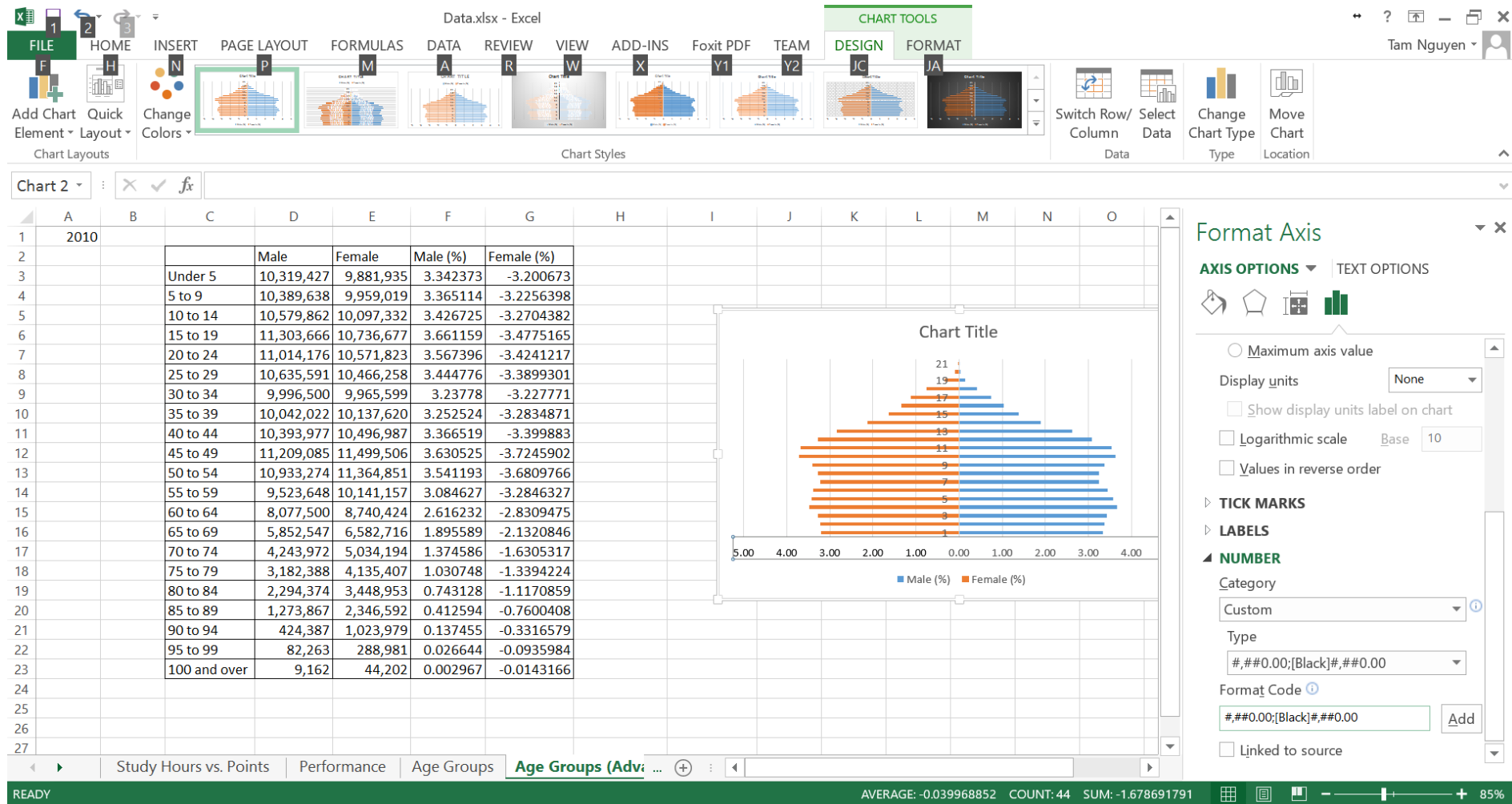
# Format axis



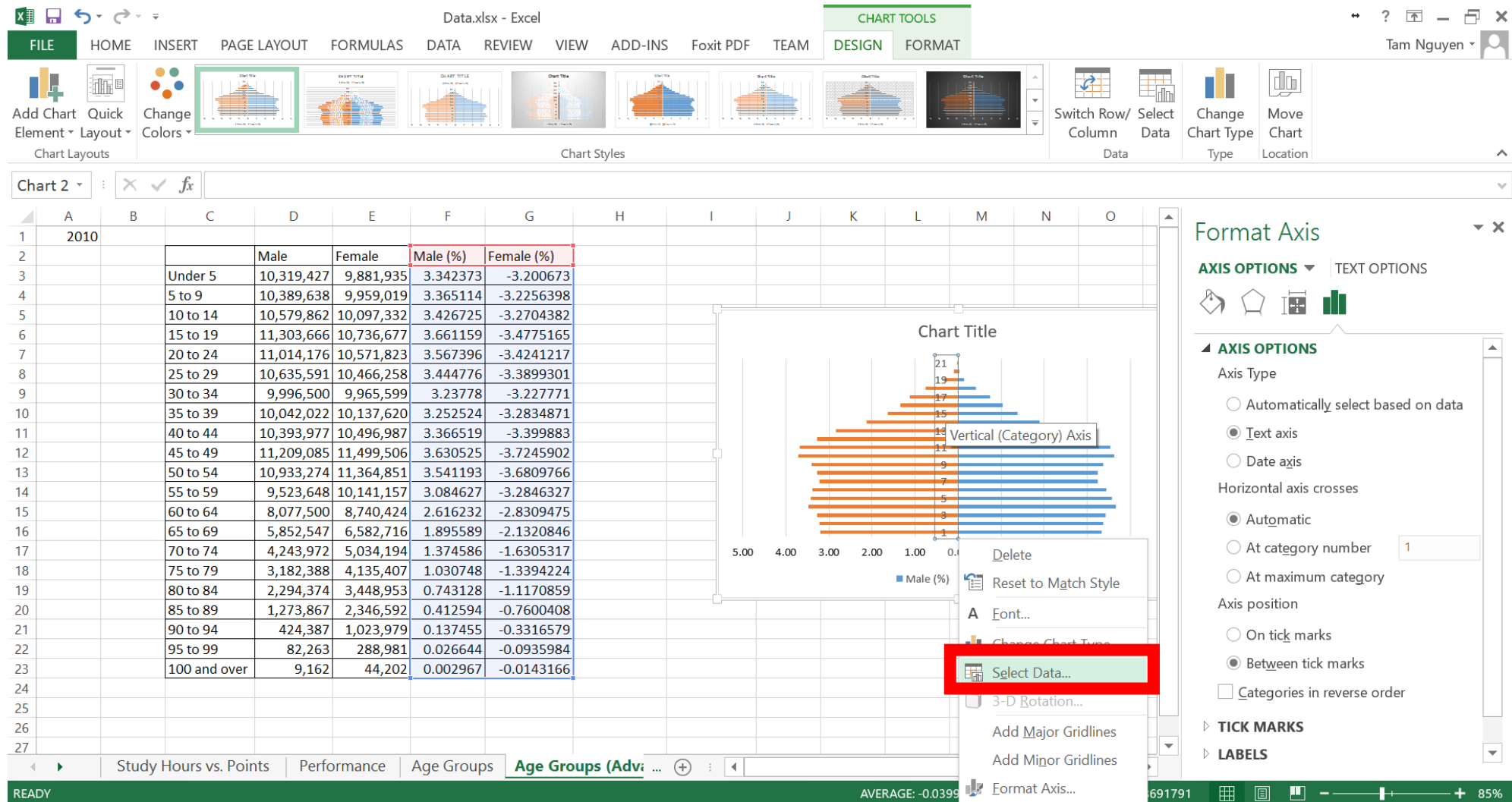
# Format axis



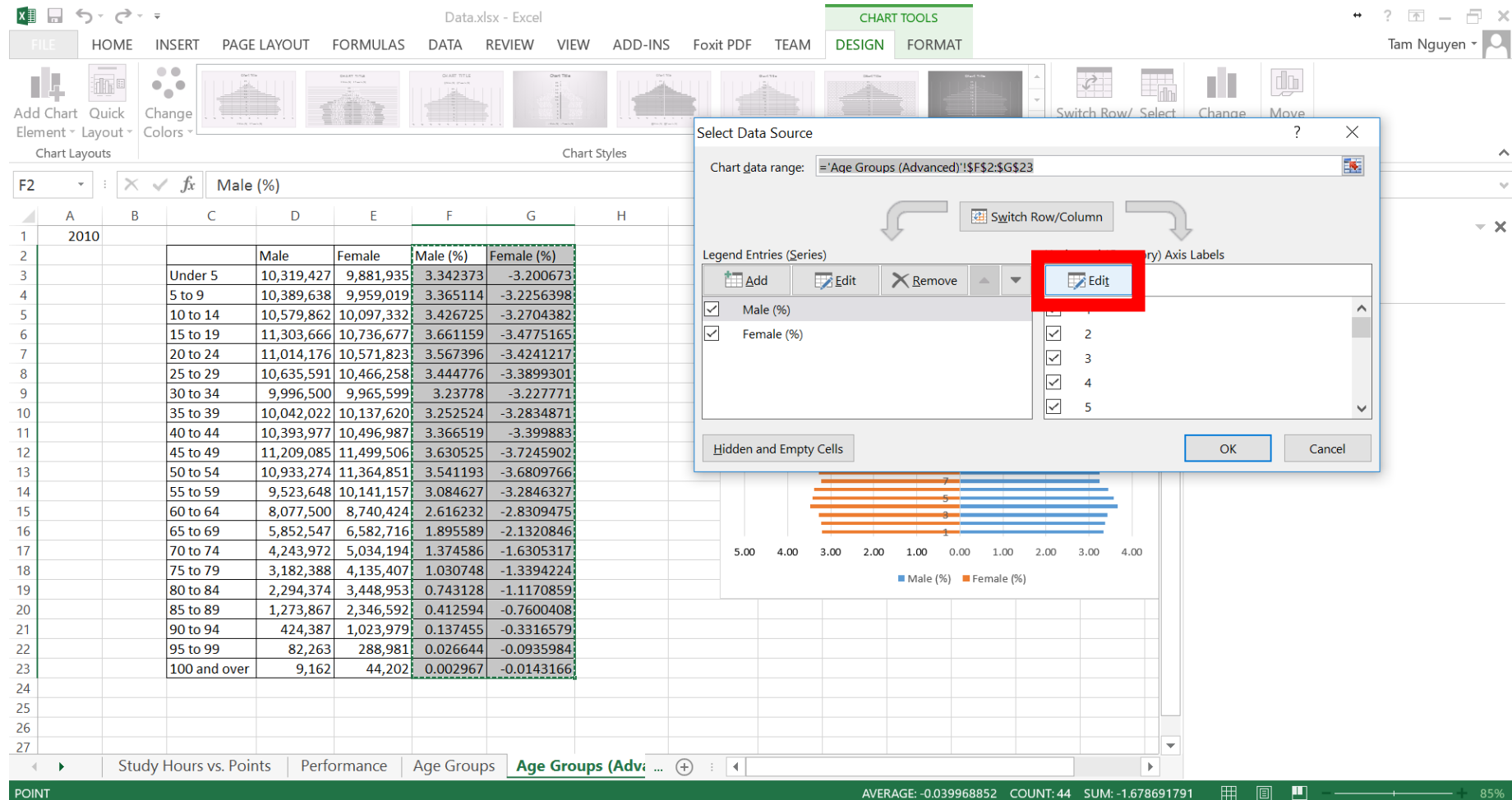
# Format axis



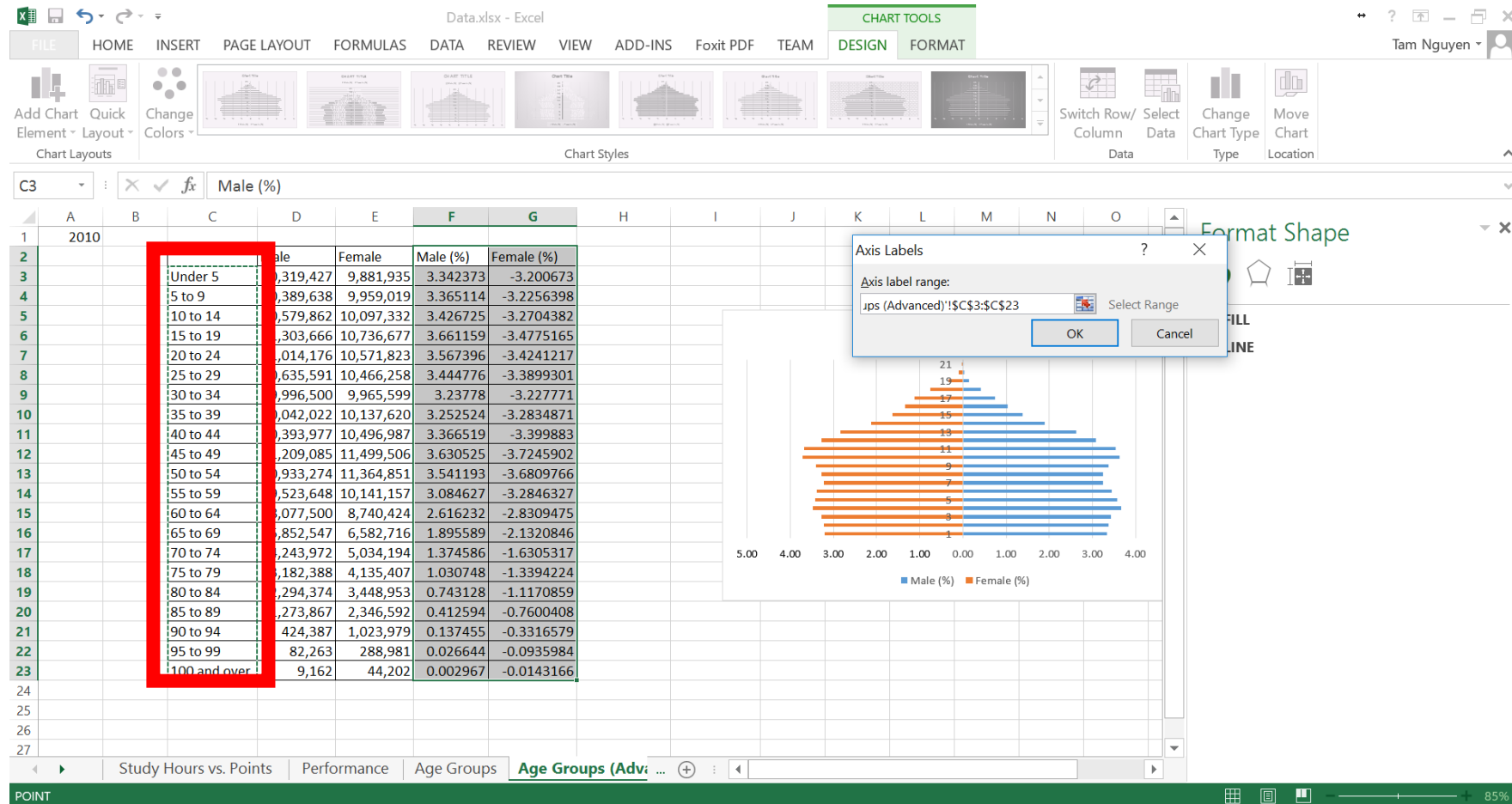
# Update the vertical axis



# Update the vertical axis

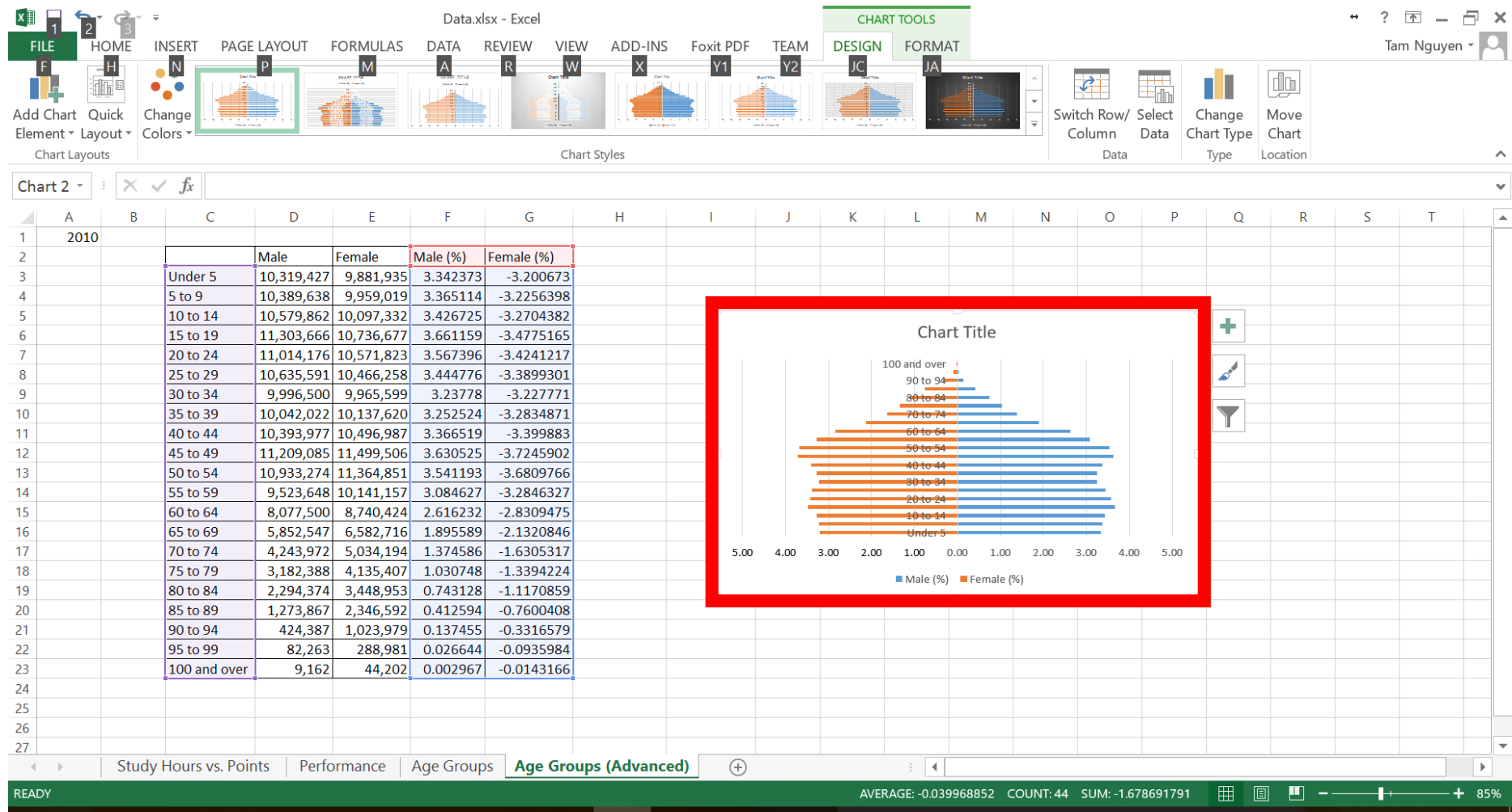


# Update the vertical axis





# The final result



# Q&A