

Making a pie chart

PREPARING THE DATA

1. Download the file **us-mobile-market-share.xls** from Canvas > Files > Course Material. This a simple database showing mobile operating systems and leading vendors for August, and for August a year ago.

2. All the data we'll need for a pair of simple pie charts is already here, but we might want to calculate the year-over-year change to help add either info to a call-out or provide a statistic in the explainer. First, we'll simply get Excel to tell us the percentage point change from last year to this year with a simple sum:

	A	B	C	D	E
1	Mobile OS market share				
2	OS	Aug-19	Aug-20	pt-chg	pct-chg
3	iOS	55.55	59.74	=SUM(C3-B3)	
4	Android	44.23	40.06		
5					

3. Next, we'll calculate the percentage change. The sum for this is a little more complicated: we'll have to divide the difference (change) between the two months, and then divide that value by the original data, or starting point. (And then multiply the result by 100 so it shows up as a percentage.)

	A	B	C	D	E	F
1	Mobile OS market share					
2	OS	Aug-19	Aug-20	pt-chg	pct-chg	
3	iOS	55.55	59.74	4.19	=SUM((C3-B3)/B3)*100	
4	Android	44.23	40.06	-4.17		
5						

4. Click the two cells that have your sums so both are selected, and drag the sums down one row to apply the formulas to the other operating system (Android).

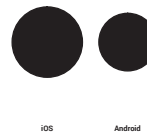
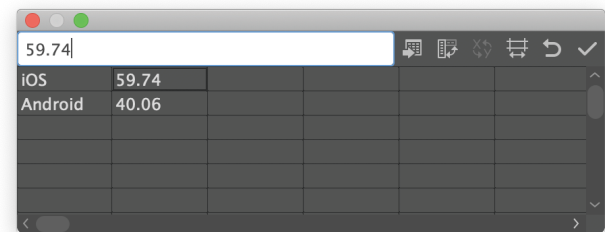
5. We will also calculate these values for the vendor section. Copy the formulas from the third row (Command-C), then paste into the first row for the vendors. You can then repeat the step of dragging down (or double-clicking) both formulas to apply them to all the entries in the vendor section.

6	Mobile vendor market share				
7	Vendor	Aug-19	Aug-20	pt-chg	pct-chg
8	Apple	55.55	59.33	3.78	6.80468047
9	Samsung	24.17	24.93	0.76	3.14439388
10	LG	6.38	4.57	-1.81	-28.369906
11	Motorola	3.88	3.34	-0.54	-13.917526
12	Google	2.60	2.57	-0.03	-1.1538462
13					
14	Source: Stat Counter				

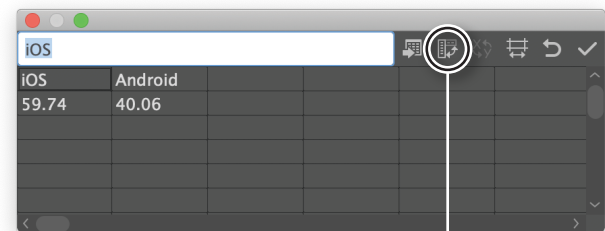
MAKING THE CHART

1. Create a new pie chart using Illustrator's graph tool. (Keep in mind, you can always change which chart you choose for your data.) Draw the chart as a "square" shape, and not too big – perhaps 8 or 9 picas across.

2. Bring in the data from Excel by copying and pasting, either directly into the data window or first to the paste-board. We will only need the 2020 data for charting purposes, and the first column we will use for the category.

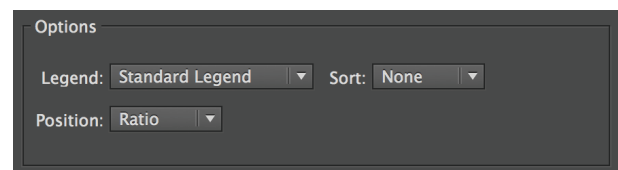


3. Clicking the check mark will show you your chart; hmmm ... not a bad visual comparison, but not a pie chart. This is because pie wedges are compared along rows, not down columns.



4. Click the "Transpose row/column" button to put all your percentages within a single row. Now you have a basic chart and are ready to do some styling.

5. In the "Graph Type" window there are a few options available for altering your pie chart, but in this class we will do most of this manually.

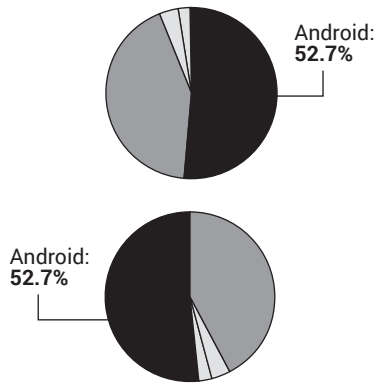


Making a pie chart

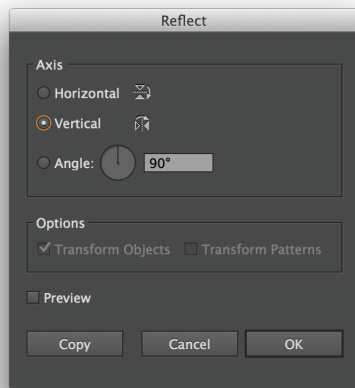
STYLING THE CHART

1. You can choose to display a legend (or key) with your chart in the Graph Type panel. This is a good idea, even if you later decide to not use it in your final graphic.

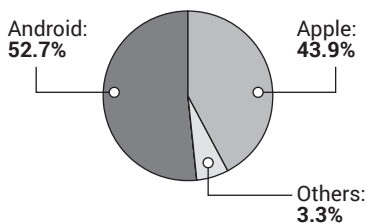
2. You can change the order of the cells in the Graph Data panel (by cutting and pasting) if you want the information to array differently. By default, Illustrator draws a chart where the first wedge starts at “12 o’clock” and proceeds clockwise. This however is the reverse of how we read – left to right – so you may decide to alter this.



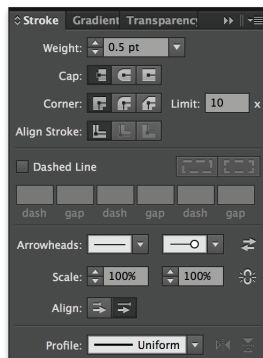
3. You can also use Illustrator’s reflect tool to create a mirror image of your chart. The tool is beneath the rotate tool in the panel. Select the chart, then double-click this tool to call up its dialog box. You can then reflect the visual along a vertical or horizontal axis. (It’s a good idea to ungroup the chart before you do this.)



4. You’ll want to label each wedge of your pie. How you do this is up to you, but you will often find the wedge is too small to easily allow you to place this information in the wedge. Keys can be difficult to connect visually, so a better method is to create some sort of pointer from the text to the wedge.



Use an arrowhead to clarify the wedge you’re pointing to, and make sure the information is easy to access.



A SECOND PIE: MORE WEDGES

Our chart is pretty simple – just two numbers. Next, we’ll try a similar chart that breaks down the market share of OEMs (devices) from the same Excel file.

1. Make sure your chart has a label – Mobile OS market share – and add the month in the description. Add in either the point change or percent change from a year ago in some fashion. Copy the chart, and the label construction, paste in front, and drag it downward. We’ll build our second chart based on the same size pie.

2. Return to Excel, to the lower half of the data. Note that if you add the two operating systems, you get almost 100 percent – rounding will actually get you there – but that, for the bottom data, the numbers add up to quite a bit less. This is because there are many different manufacturers in this market – we are using only the top five. But for our pie chart, we will need the whole to represent the entire market – not just the percentage of the top five. We’ll have to calculate a sixth row for vendors, which we will mark as “others.”

3. Click the cell after the last entry, and pull down Insert > Rows. (You can select multiple cells to insert multiple rows, or columns.)

4. Add the “Other” category, and add a sum for each of its adjacent cells:

6	Mobile vendor market share				
7	Vendor	Aug-19	Aug-20	pt-chg	pct-chg
8	Apple	55.55	59.33	3.78	6.80
9	Samsung	24.17	24.93	0.76	3.14
10	LG	6.38	4.57	-1.81	-28.37
11	Motorola	3.88	3.34	-0.54	-13.92
12	Google	2.60	2.57	-0.03	-1.15
13	Other	=SUM(100-(B8+B9+B10+B11+B12))			
14					
15	Source: Stat Counter				

5. Drag this sum one cell to the right to calculate the values there, then you drag the two sums in columns D and E down one cell to calculate point and percentage change.

6. Use this data to create your second chart. Look to make color connections in your two charts. Craft an overall headline and explainer, and be sure to include the source and credit.

7. We’ll size or graphic into a one-column space, based on 11-pica columns. Draw an 11p-wide box with the rectangle tool by option clicking on the page with that tool selected. Give the box a tone (color) through which you will be able to read small black text. Offset the path of the box by -1p (Object > Path > Offset Path) and make this second rectangle a guide (Command-5) that you can use to align the elements.