# Communicating Information
# Turning Stats into Graphics

Executive director and editor for the international award-winning data journalism team, InfoTimes, and pioneered data-driven storytelling in the region.

Lecturer at the American University in Cairo (AUC) where I teach ‘Data for Media’. I am also a data consultant for the World Bank and contributes to the data literacy program in the MENA region. I have over 15 years of experience in the field of journalism (print, TV and online).

Throughout the years, I trained thousands of journalists across the MENA region in collaboration with various prominent organizations such as BBC Media Action, Internews Europe, DW Academy, and Free Press Unlimited.  In 2016, I authored his first book ‘The Fundamentals of Data Journalism’, which was published in Arabic by Al-Arabi for Publishing and Distribution.

The following year, I published his second book ‘Data Journalism Handbook to Covering Human Rights Issues’, which was published by Journalists for Human Rights organization.

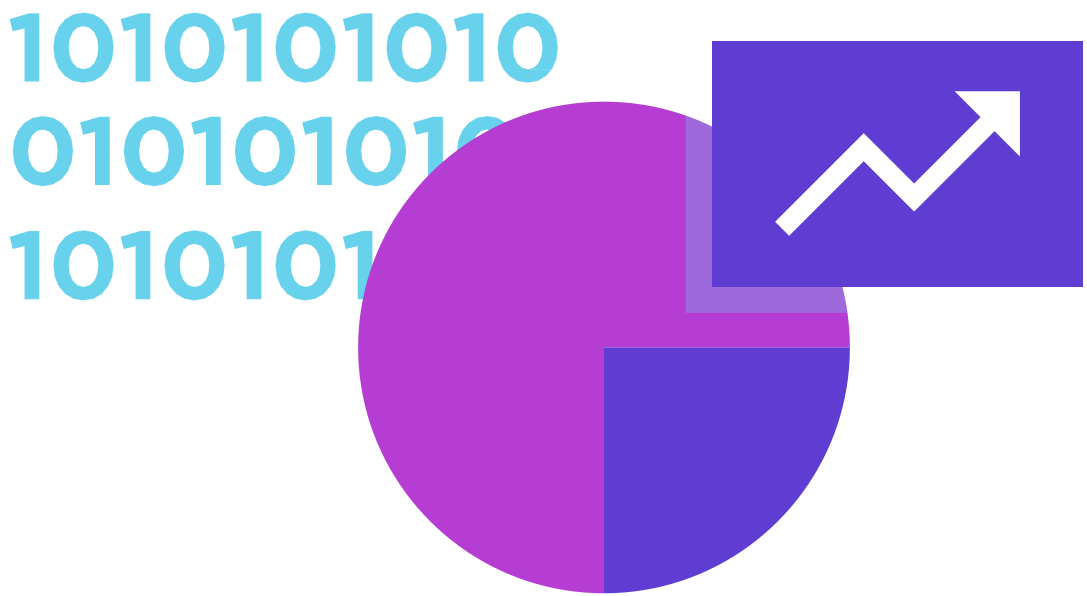
**Amr Eleraqi**

@aeleraqi

# Agenda!

- What?
- Why?
- How?

# WHAT IS DATA VISUALIZATION?




DATA VISUALIZATION INVOLVES INTERPRETING DATA SIMPLE, EASY TO UNDERSTAND INFORMATION USING VISUALS

# WHY DATA VISUALIZATION IS IMPORTANT?


# VISUAL DATA HELPS US TO THINK AND COMMUNICATE

# Visualization Goals

- Answer questions (or discover them)
- Make decisions
- See data in context
- Support graphical calculation
- Find patterns
- Present argument or tell a story
- Inspire

A PICTURE TELLS A STORY BETTER THAN A THOUSAND WORDS COULD

BY VISUALIZING YOUR DATA,
YOU CAN COMMUNICATE YOUR
STORY MORE EFFECTIVELY

**Amr Eleraqi**
2 May ·

Edit.. Because many people asked me about the tool I used in designing these plans, a link to training sessions on the data school website https://bit.ly/3edZSu3

You can view the interactive chart here
https://public.flourish.studio/visualisation/6038624

An interactive planner - a little complicated - shows the prices of Eid Al-Fitr dessert, the chart shows a contrast in the prices of different desserts varieties.... **See more**

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**Ahmed Abo Emira**
انت هتبقى تريند قريب على فكره
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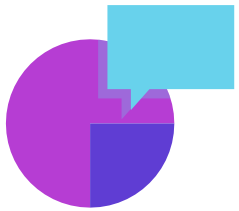
# 4 KEY QUESTIONS FOR SUCCESSFUL DATA VISUALIZATION



WHAT IS THE STORY YOUR DATA IS TRYING TO TELL?

WHAT TYPE OF DATA DO YOU WANT TO EXPLAIN?

WHAT CHART TYPE WILL DISPLAY YOUR DATA IN THE SIMPLEST AND MOST EFFICIENT WAY?

WHO IS YOUR AUDIENCE?

# WHAT IS YOUR STORY?

All data tells a story. Data visualization
makes the story easy to understand


Are sales up or down? Is the birthrate on the increase?
Are expenses under control?

# WHAT TYPE OF DATA DO YOU WANT TO EXPLAIN?

Quantitative data deals with numbers and things you can measure objectively. This can be:

POPULATION STATISTICS

SALES & EARNINGS

BUDGET FIGURES


EXPENSES ETC

# DATA TYPES

Nearly every organization has quantitative information to collect, dissect, understand and present

Data visualization allows you to present this data in a simple visual way so that it makes sense at a glance

Quantitative data is ideal for visualization.It summarizes the data's essential characteristics allowing to disregard exceptions

# WHO IS YOUR AUDIENCE?

Are you presenting to a board of directors,
healthcare professionals, prospective investors?

# KNOW YOUR AUDIENCE

Your audience should influence how you visualize your data. Understanding how your audience best digests data will influence which chart types you will use

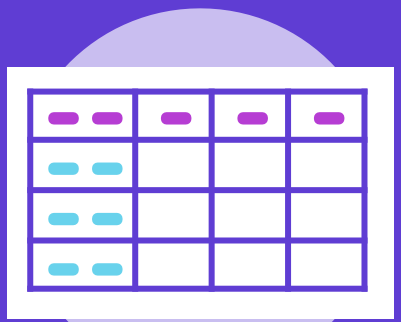
# KNOW YOUR AUDIENCE

Get to the point.
As much as storytelling is an art, knowing what your audience need to know from the numbers is critical. Choose the simplest and clearest chart type which allows you to get straight to the point

# CHOOSE THE VISUAL AID THAT WILL SPEAK DIRECTLY TO YOUR AUDIENCE

# WHAT CHART TYPE WILL DISPLAY YOUR DATA EFFICIENTLY?

Each chart type is suited to telling a different story.
Common chart types include:

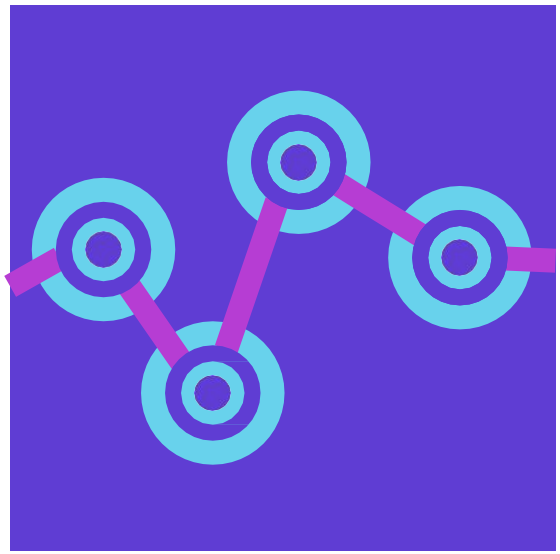


- PIE CHARTS
- BAR GRAPHS
- LINE GRAPHS
- SCATTER GRAPHS
- BUBBLE GRAPHS
- HEAT MAPS

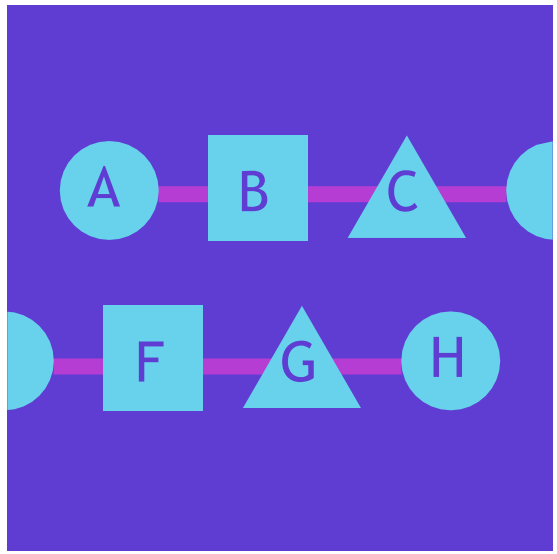
# WHY VISUALIZE WITH GRAPHS

GRAPHS ALLOW YOU TO GET STRAIGHT TO THE POINT
A SIMPLE GRAPH CAN TELL A STORY OF A THOUSAND WORD

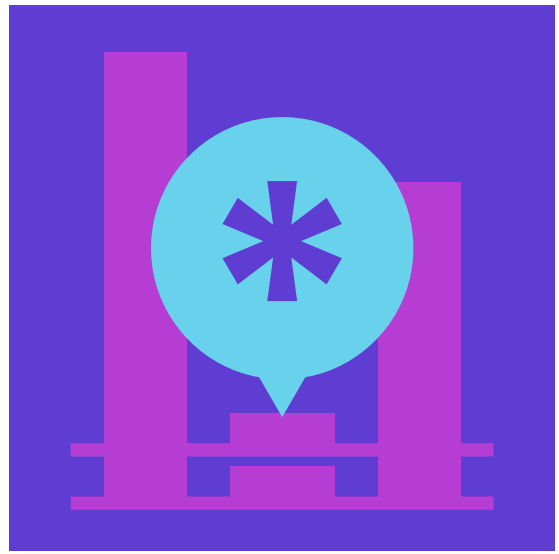
# GRAPHS ALLOW YOU TO SHOW



TRENDS




PATTERNS

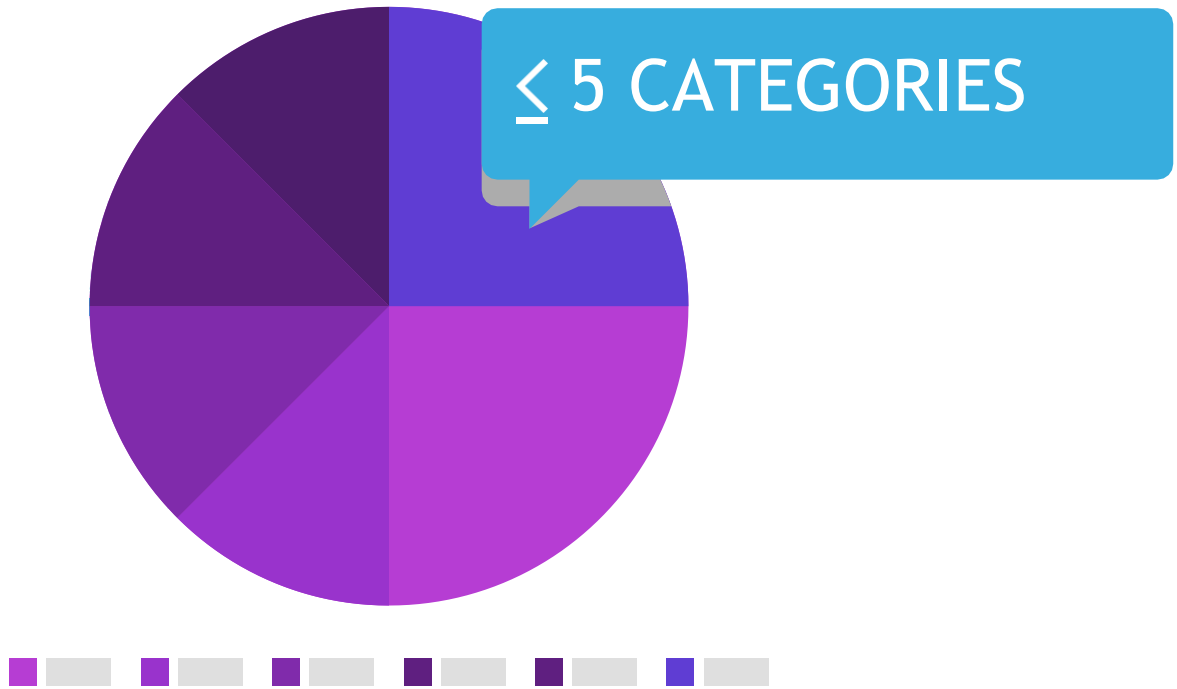


EXCEPTIONS

# DATA VISUALIZATION USING PIE CHARTS

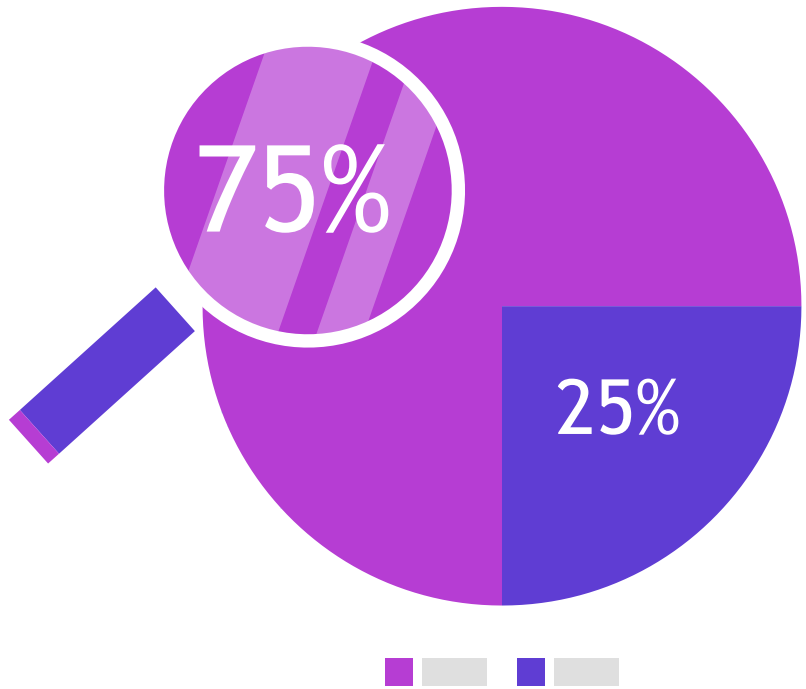

Perfect for displaying proportions and percentages in a part-to-whole relationship

# PIE CHART TIPS



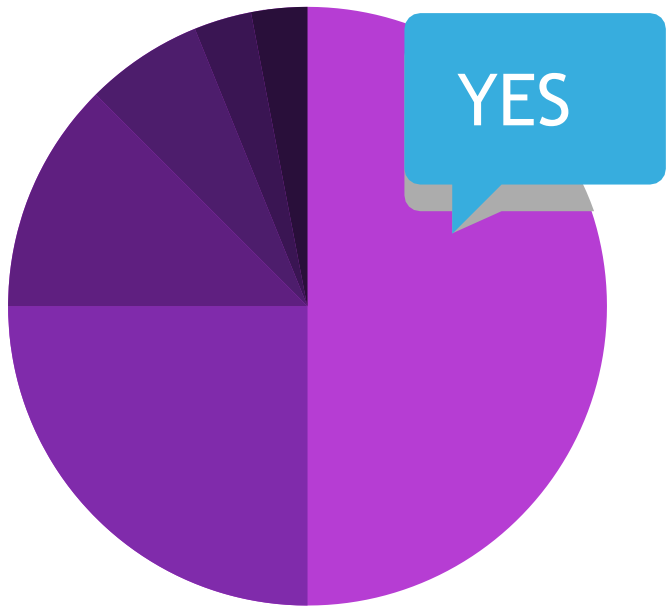

Less is more:
limit the number of categories to 5 or less

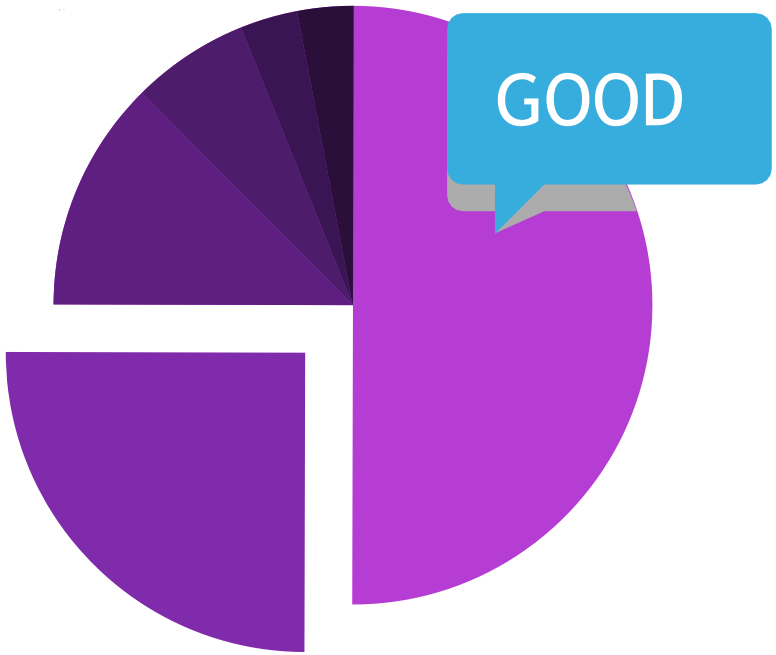
# PIE CHART TIPS




Clearly label percentages
to avoid misinterpretation of the segment sizes

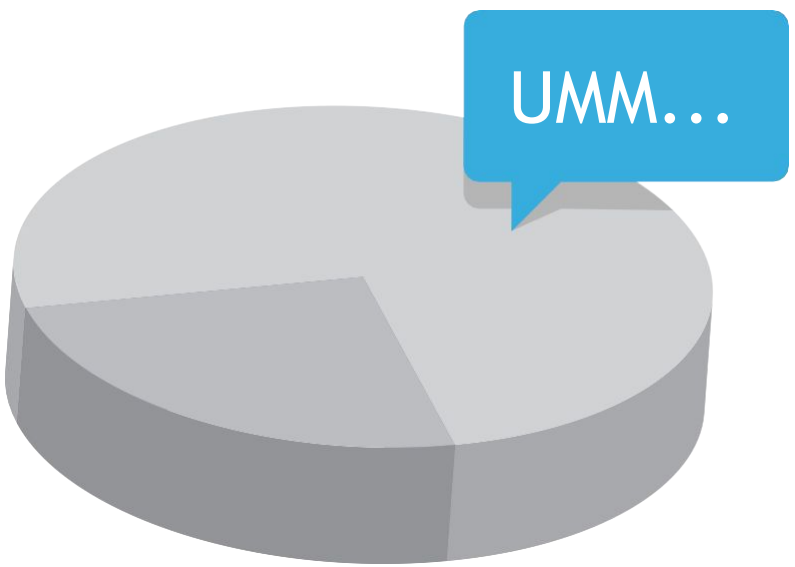
# PIE CHART TIPS




Order slices so that they are quickly understood

# PIE CHART TIPS



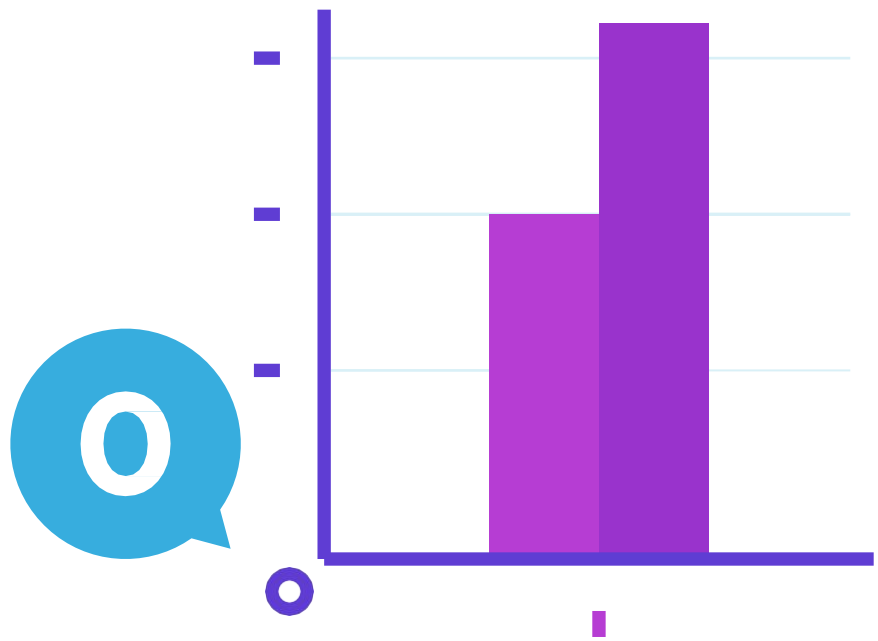


Avoid the use of 3D pie charts,
they make the data more difficult to understand

# BAR GRAPH

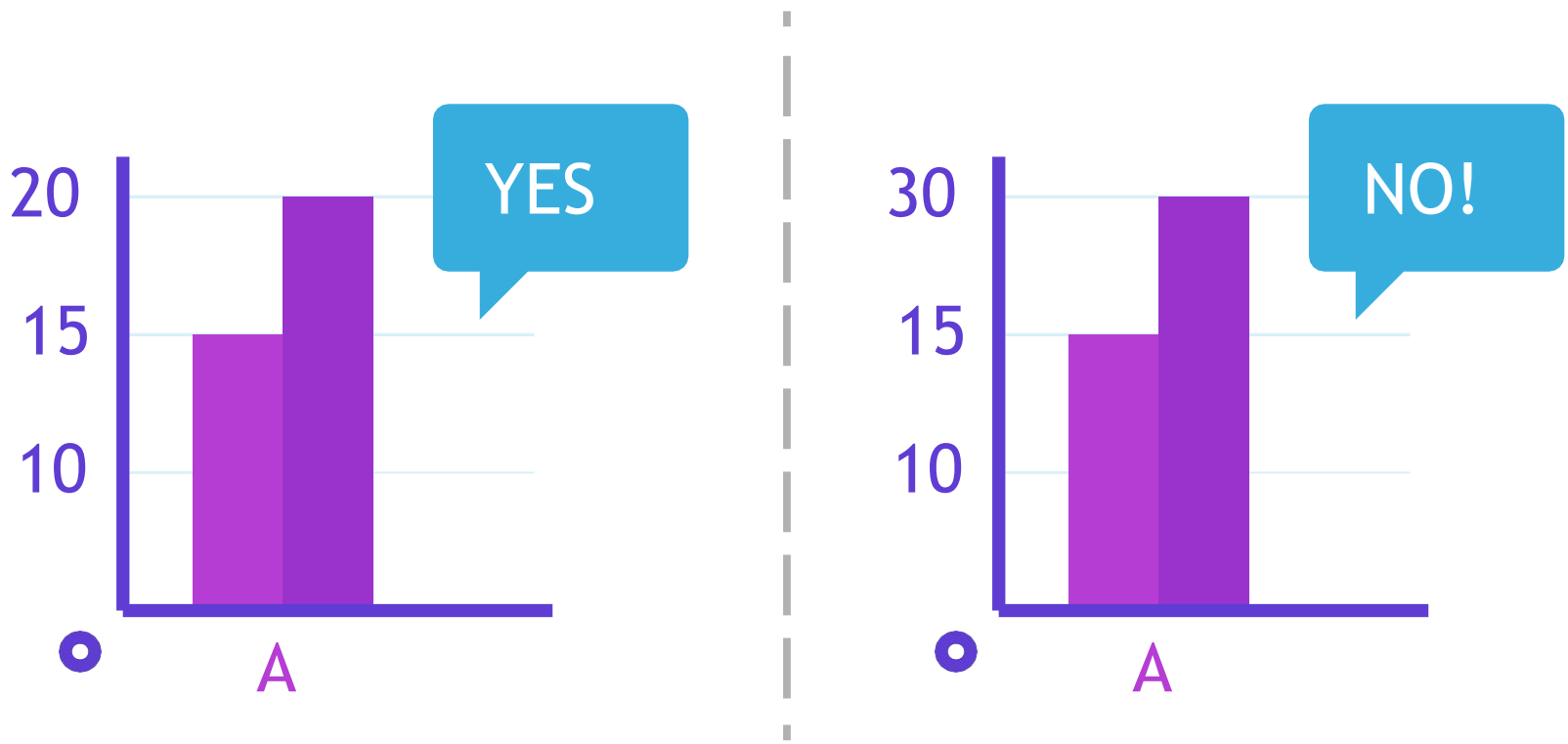
Use a bar graph to show groups comparison.
They can be either horizontal or vertical

# BAR GRAPH TIPS



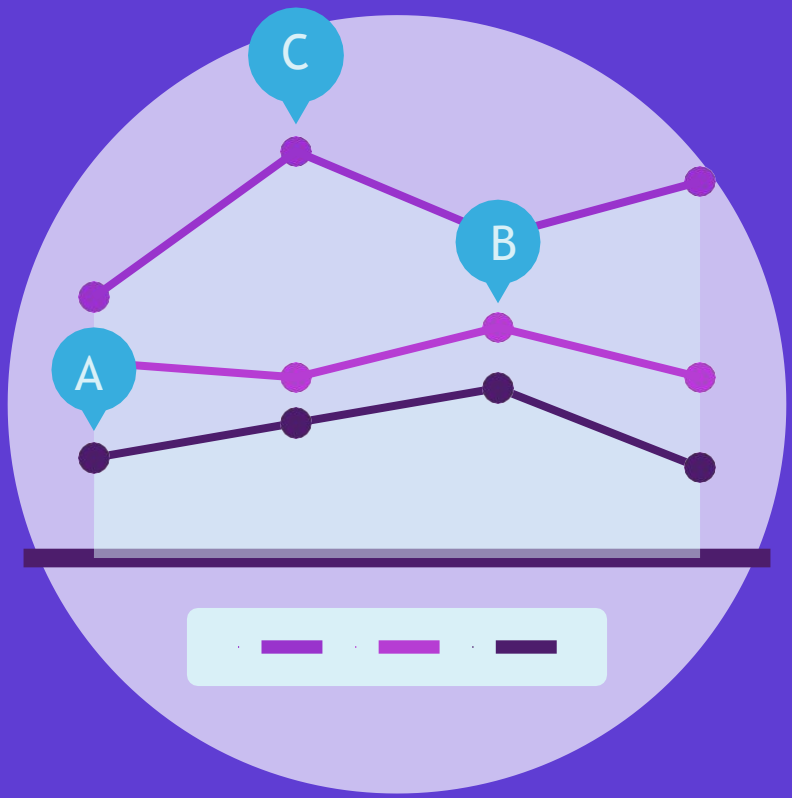

Always start value axis at zero

# BAR GRAPH TIPS



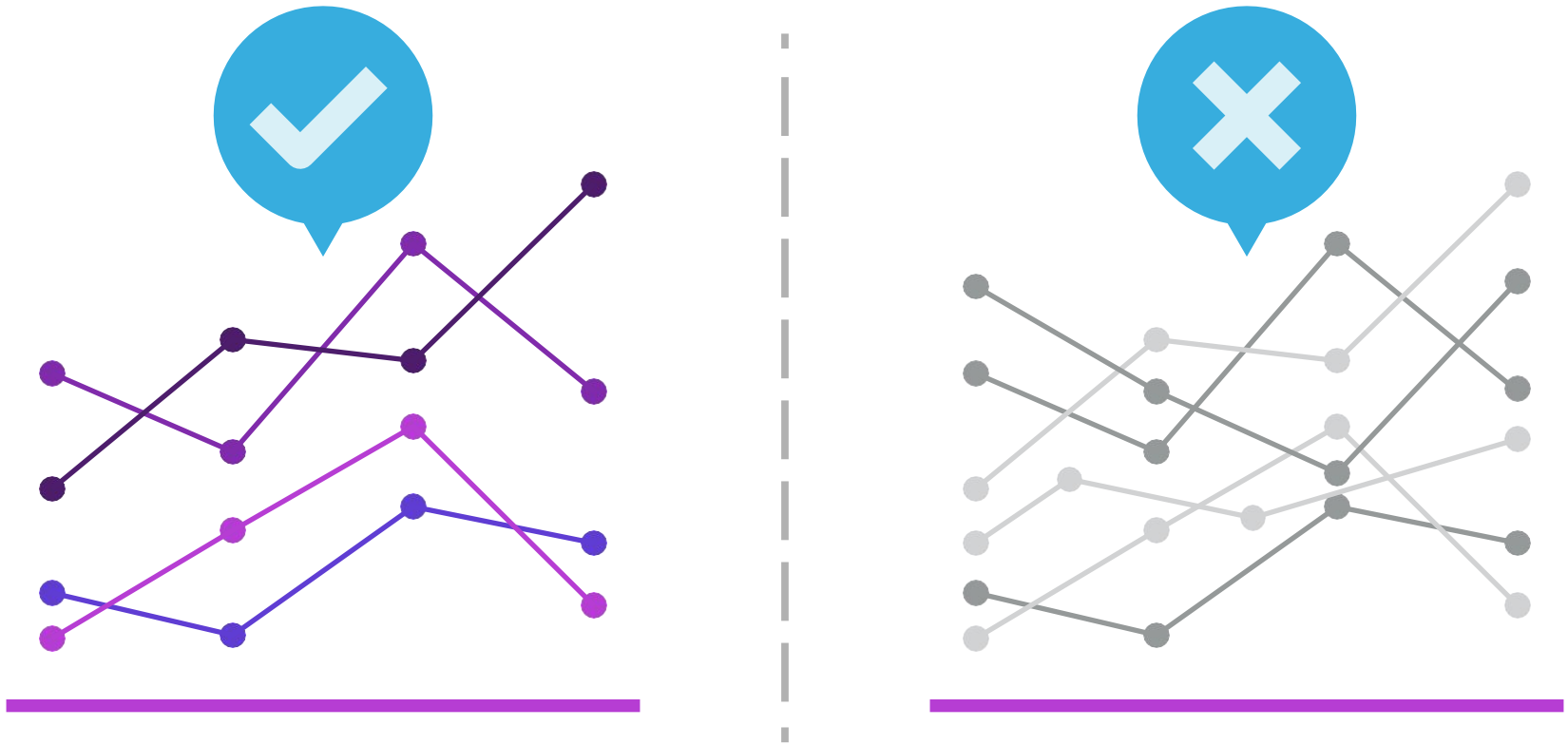

Use a consistent scale

# LINE GRAPH



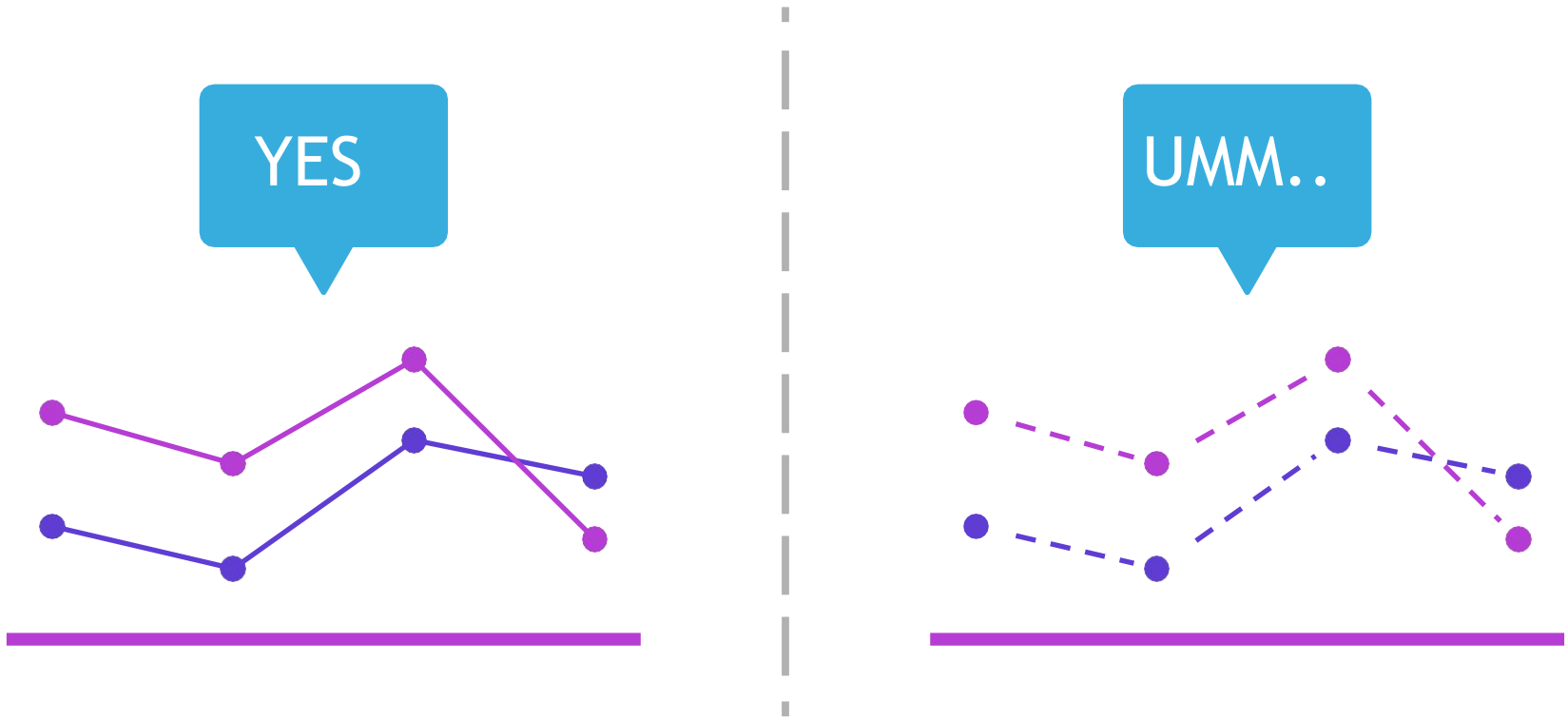

A line graph uses a line to show time-series relationships of continuous data. They are great for showing trends and changes over time

# LINE GRAPH TIPS



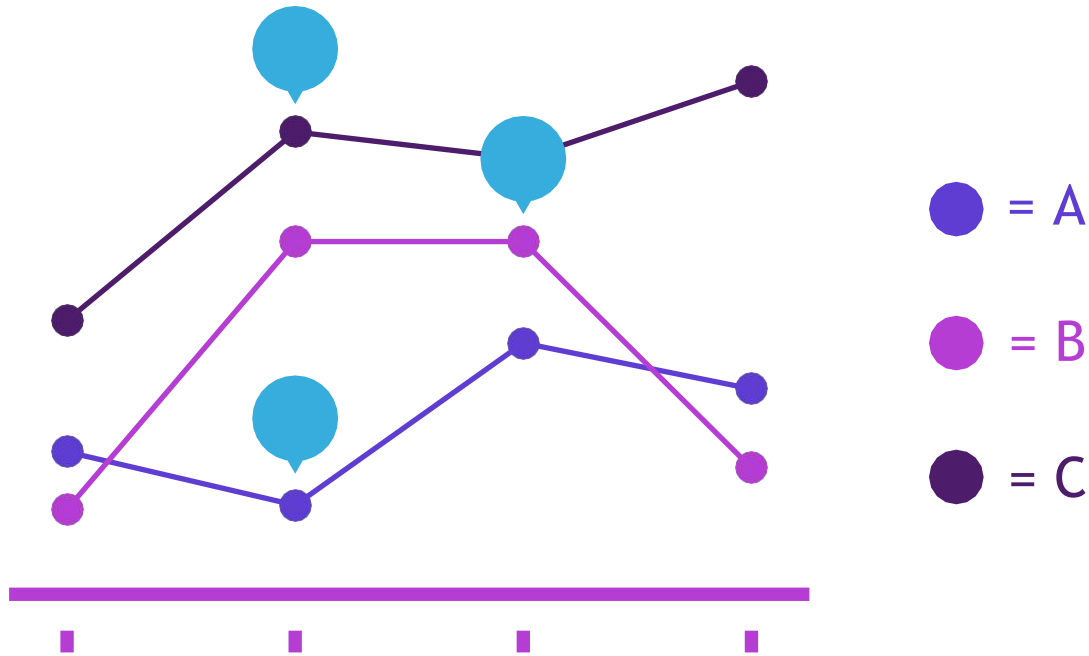
Use a maximum of 4 lines when comparing

# LINE GRAPH TIPS



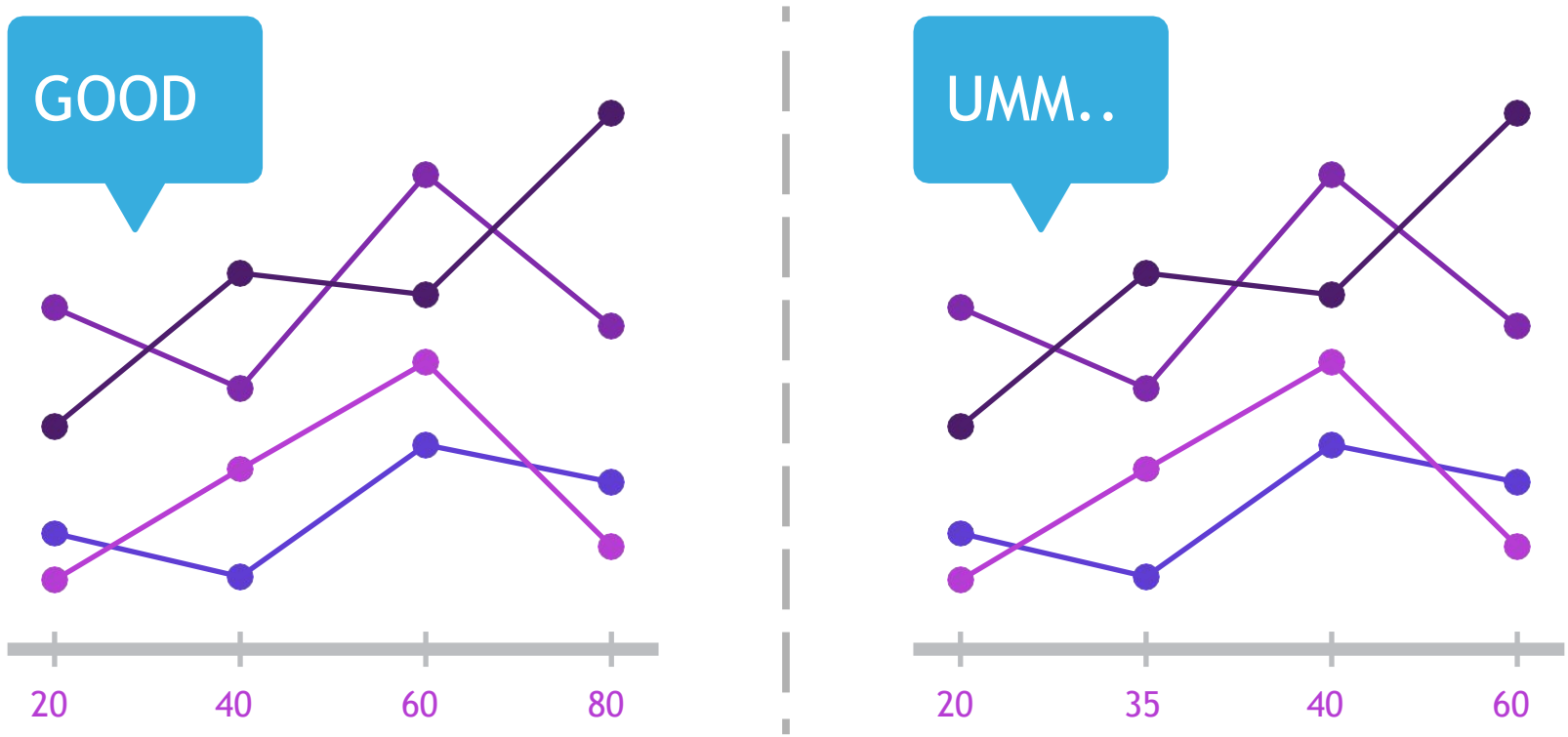

Use solid lines and not dotted lines

# LINE GRAPH TIPS




Label each line separately

# LINE GRAPH TIPS

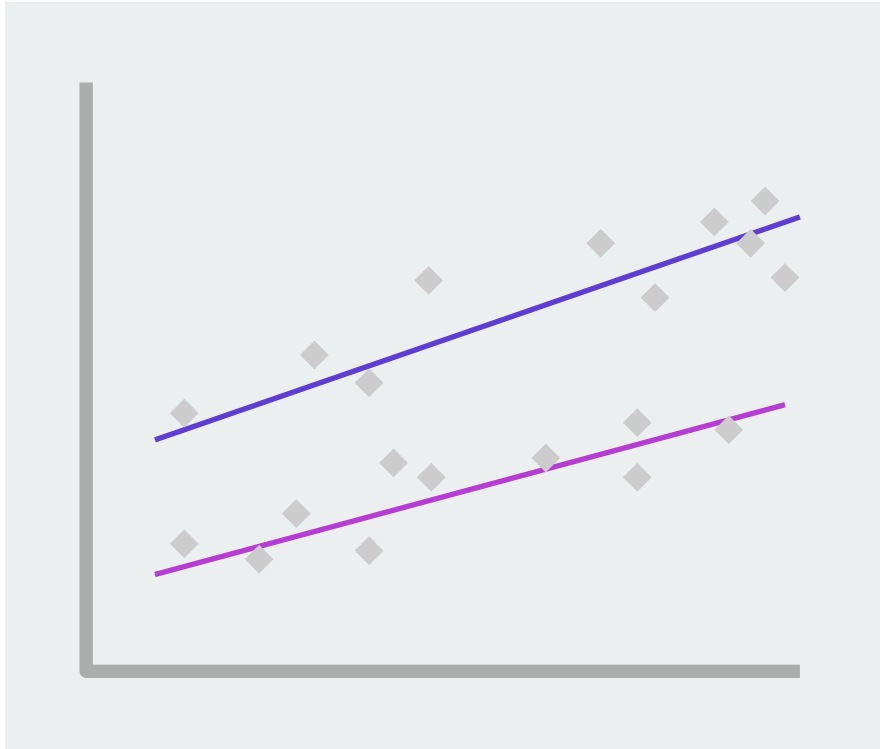



Use a correct scale for the graph

# SCATTER GRAPH

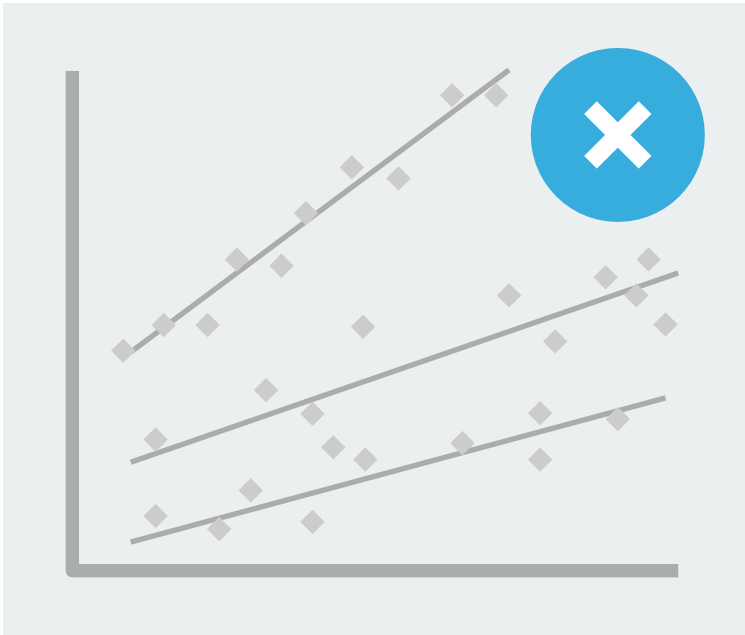
Scatter graphs can be used to show the relationship between two variables. Perfect to use for large data sets such as population or epidemiology studies.

# SCATTER GRAPH TIPS



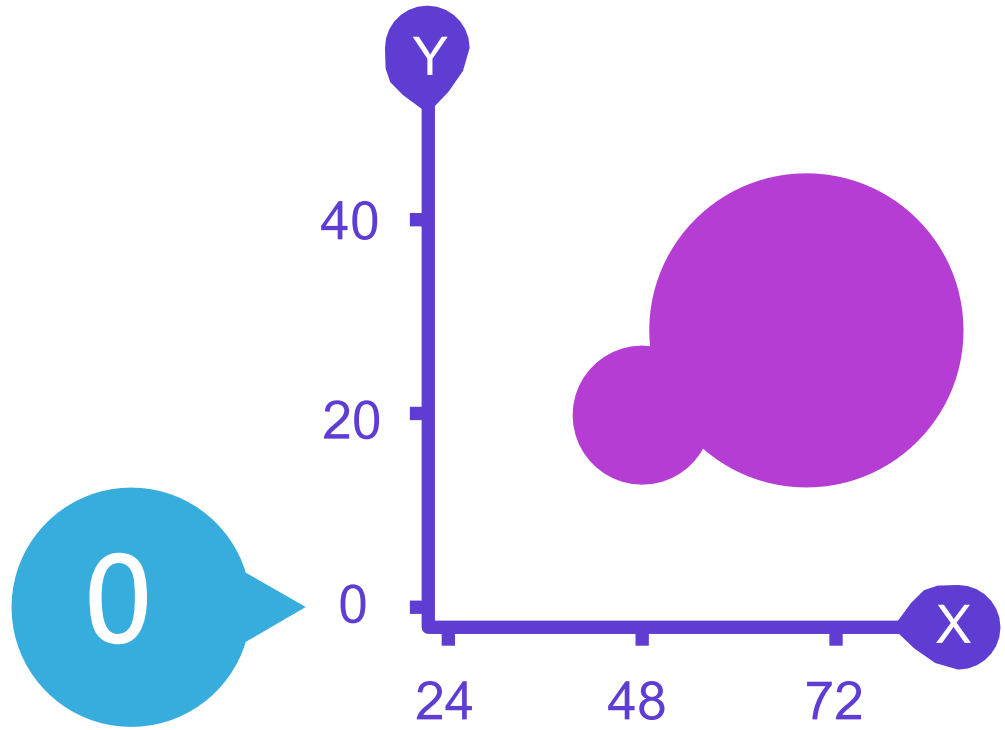
Use lines to show trends & relationships.

# SCATTER GRAPH TIPS



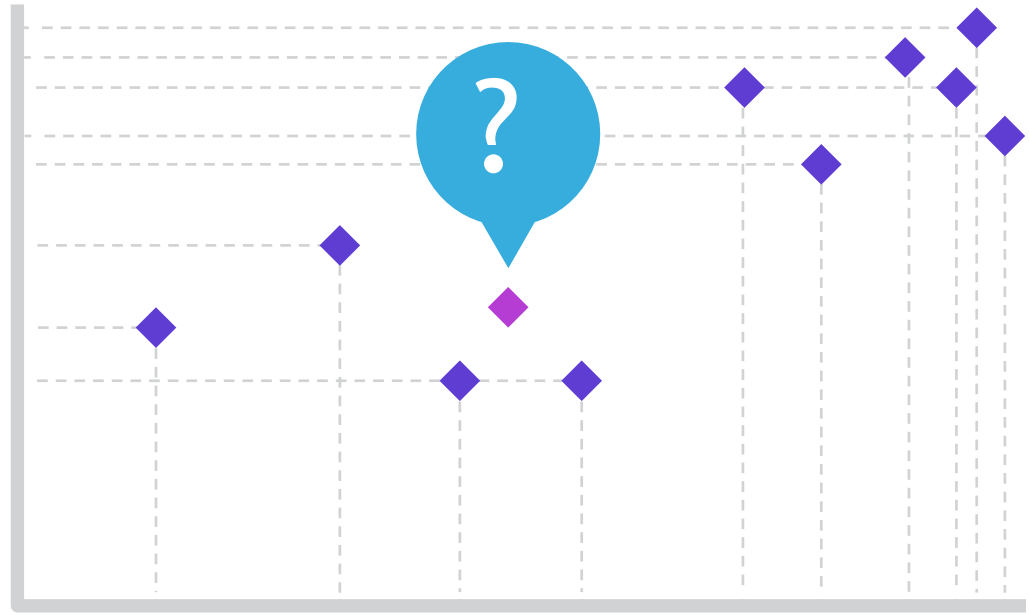
Use as few lines as possible

# SCATTER GRAPH TIPS




Always start with the Y-axis at 0.

# SCATTER GRAPH TIPS




WARNING:

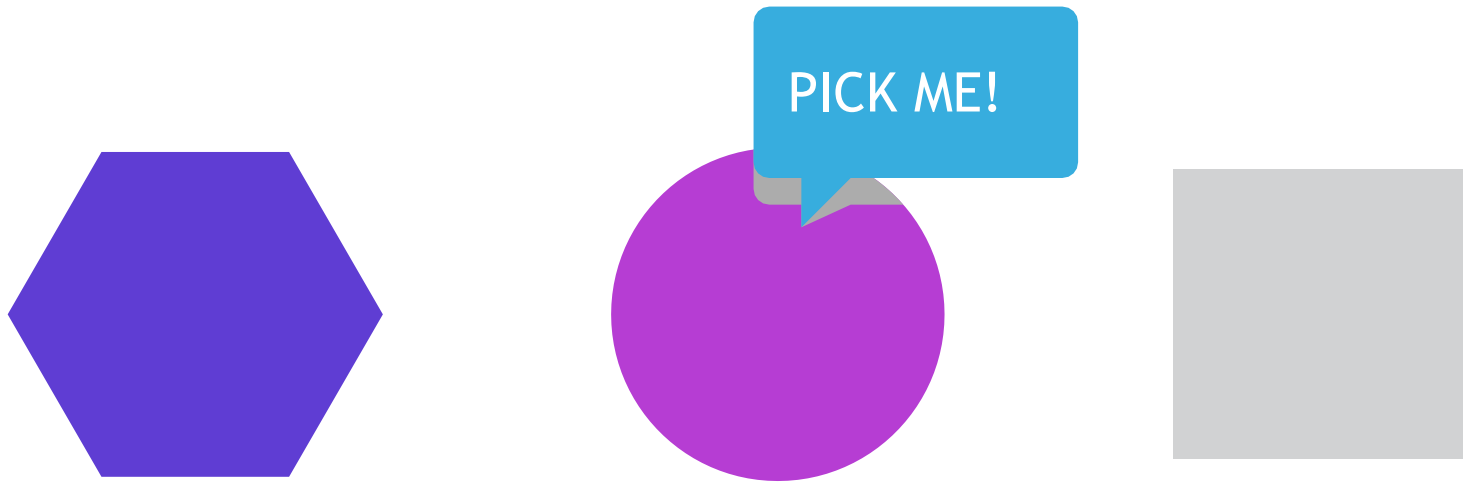
Be wary of creating a non-existent cause-effect relationship

# BUBBLE GRAPH

Bubble graphs can be used to show 2, 3 or 4 variables on the same graph.

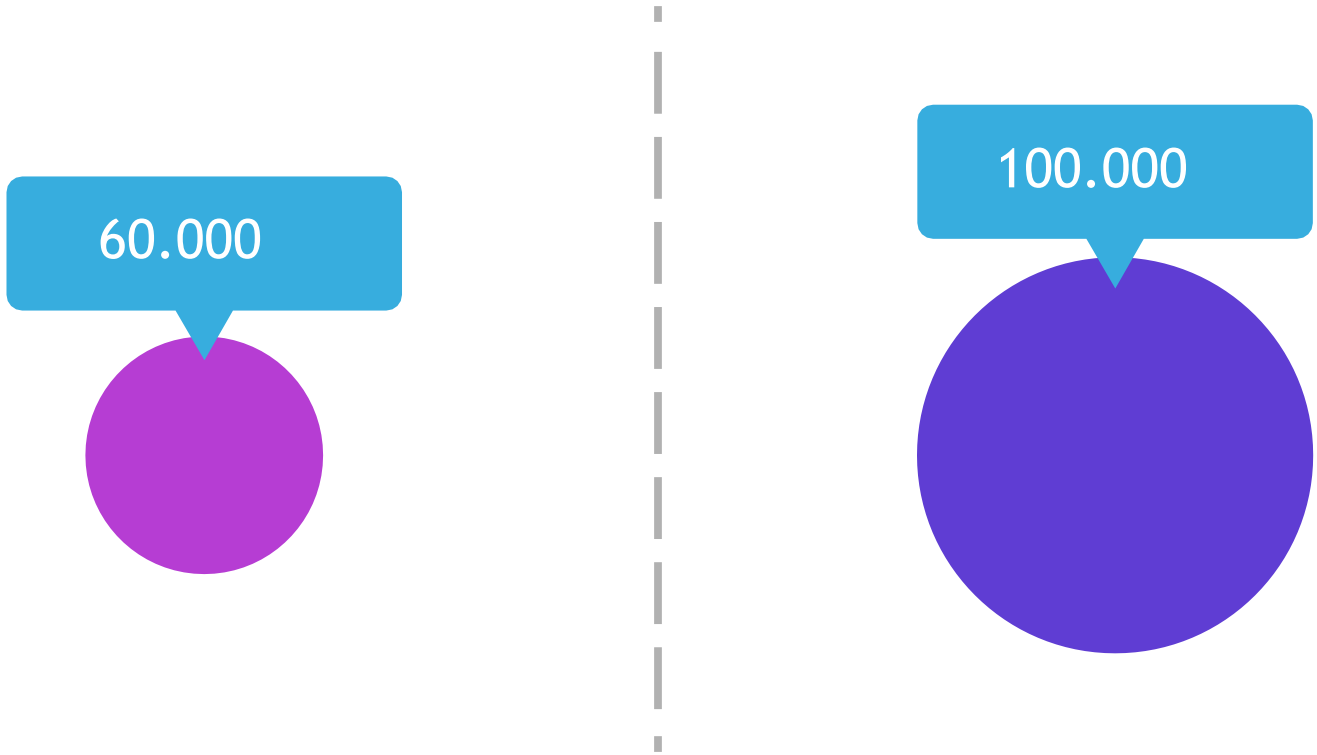
By using different size or colour of bubbles, a bubble graph can show relationships between data in a very clear manner.

# BUBBLE GRAPH TIPS



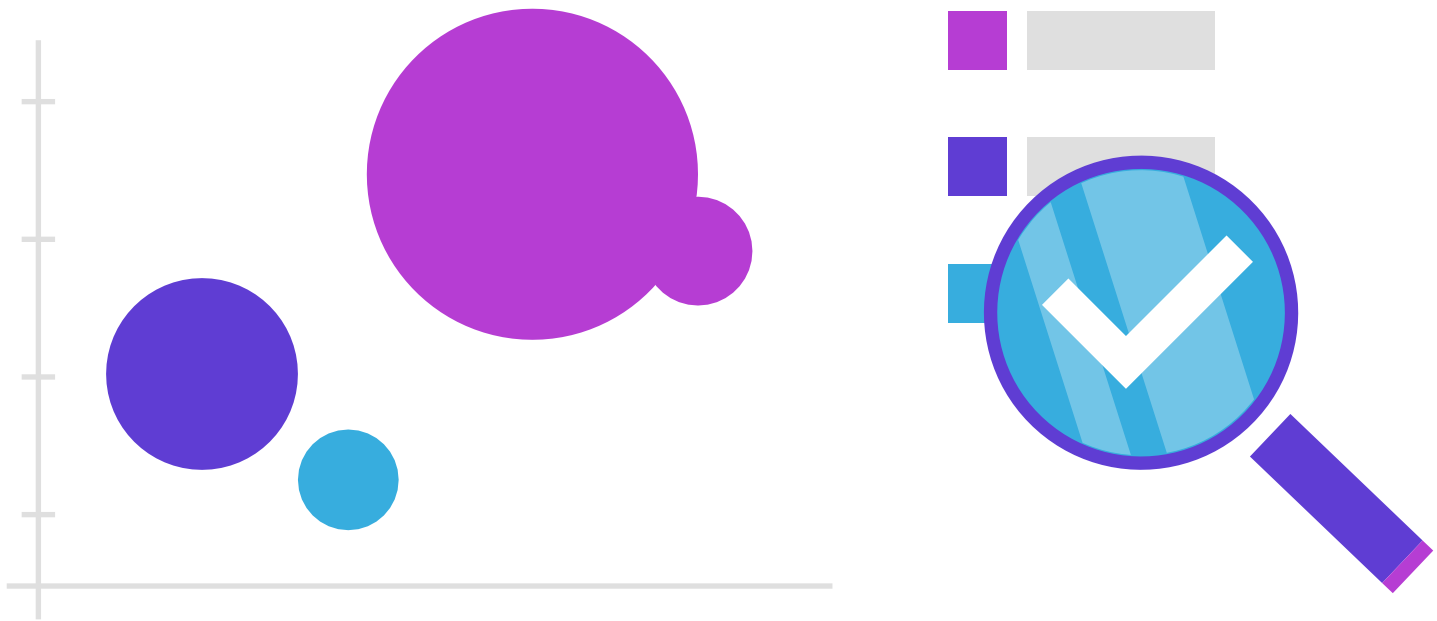

Use simple shapes. Circles work best.

# BUBBLE GRAPH TIPS



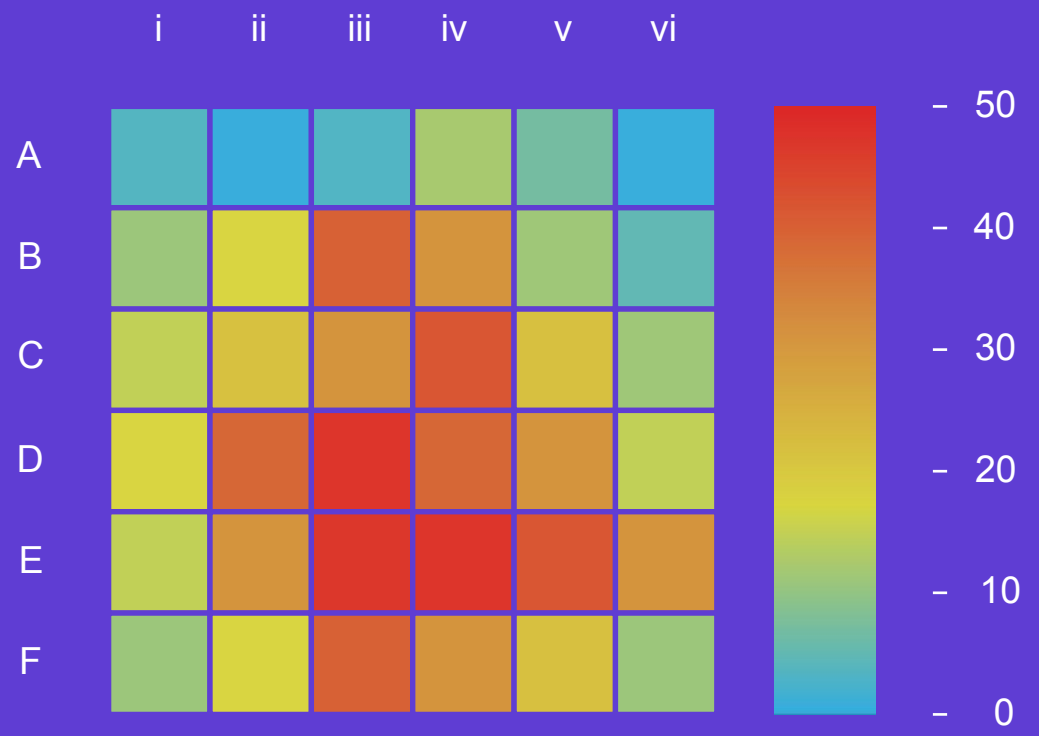

Size bubbles appropriately.

# BUBBLE GRAPH TIPS



Use clear and visible labels.

# HEAT MAP

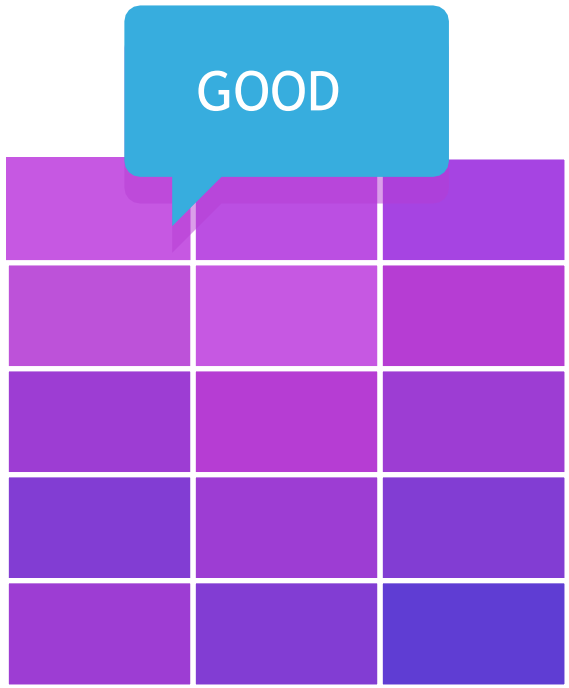


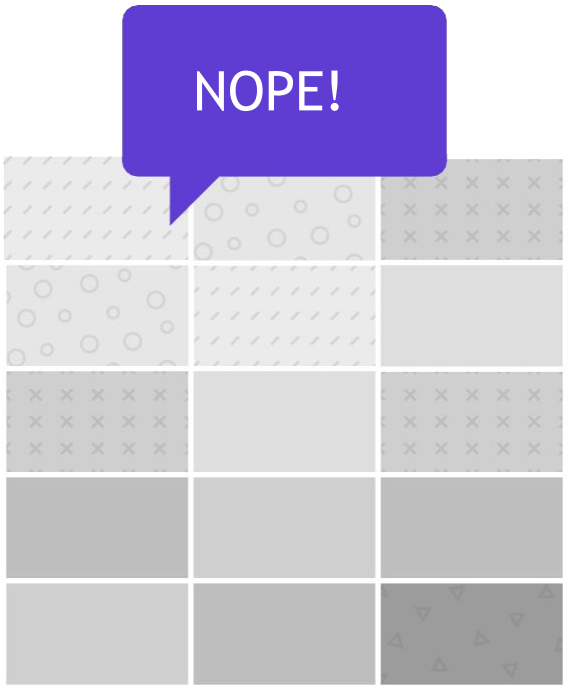

Heat maps are great for showing geographical or complex data.
By using different shades of color, comparisons can be clearly shown

# HEAT MAP TIPS

Use simple color gradients

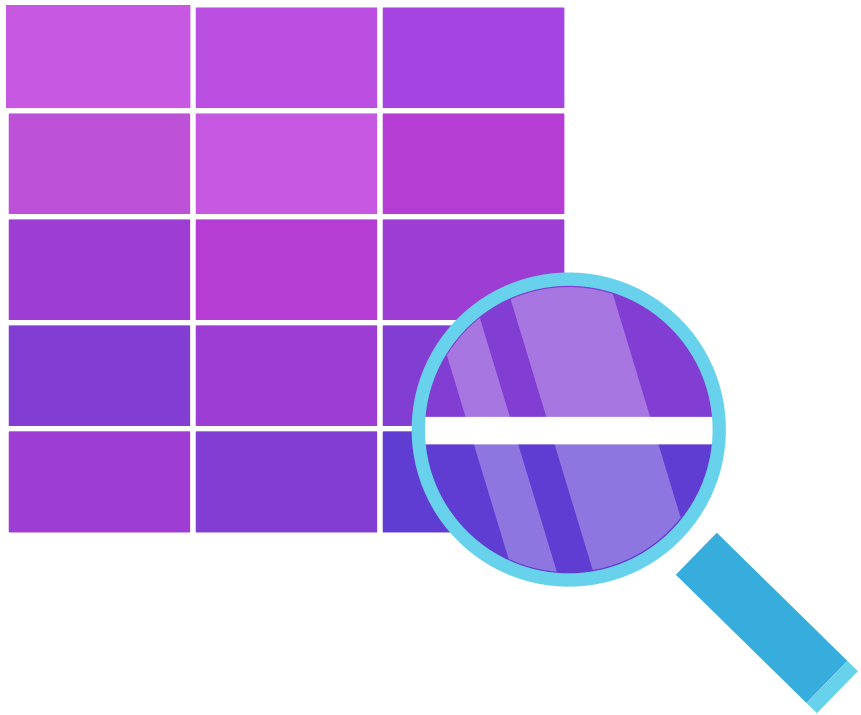
# HEAT MAP TIPS



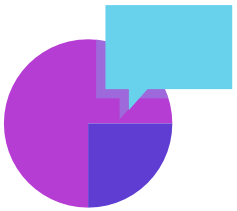

Keep patterns to a minimal

# HEAT MAP TIPS



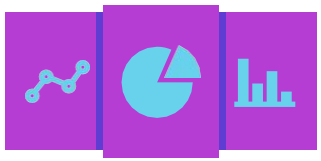
USE CLEAR MAP BOUNDARIES

# 4 KEYS TO DATA VISUALIZATION

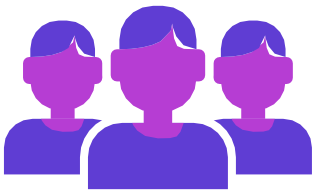


TELL A STORY

EXPLAIN DATA SIMPLY



CHOOSE THE RIGHT VISUAL (CHART TYPE) FOR EFFECTIVE COMMUNICATION



SPEAK TO YOUR AUDIENCE