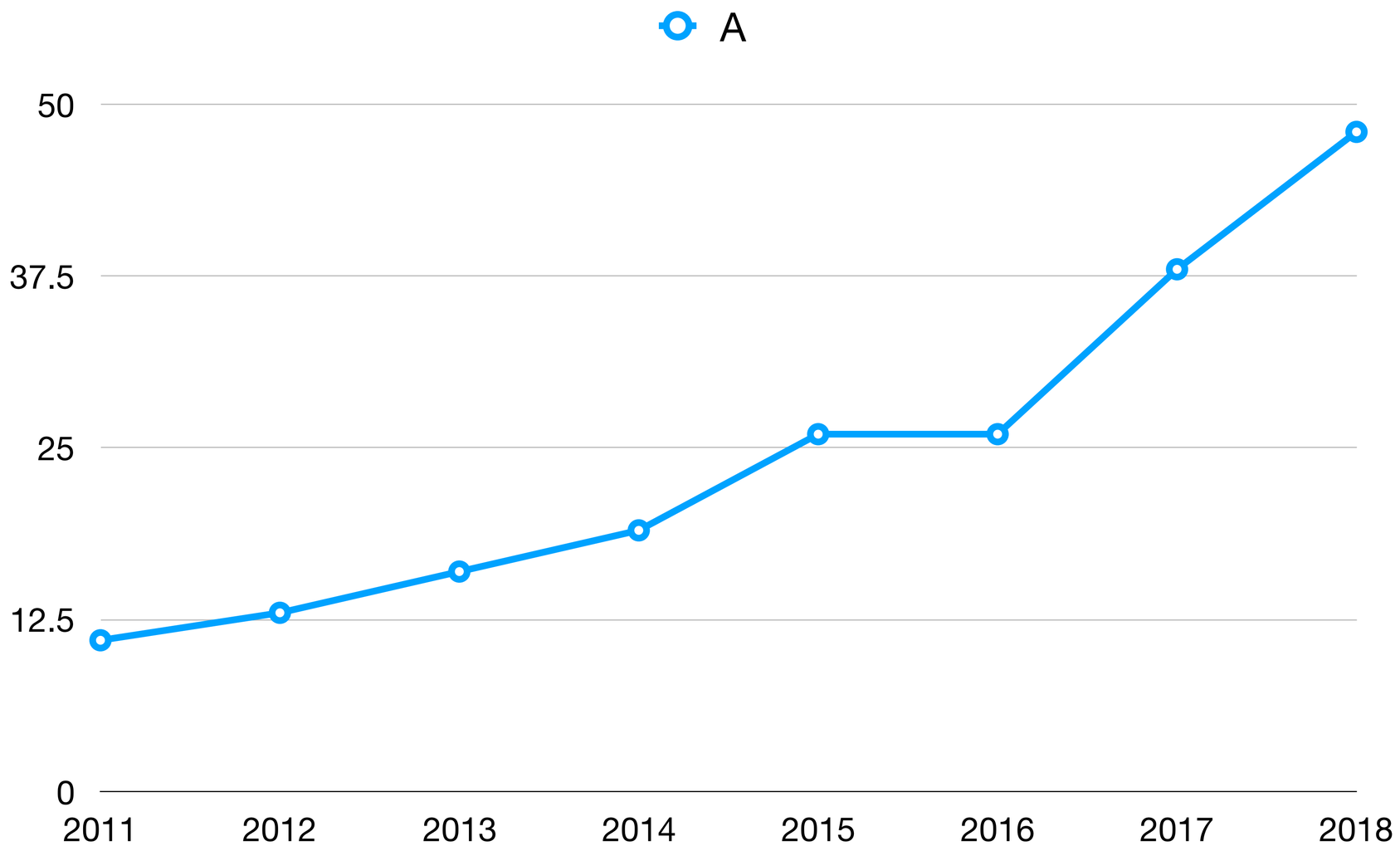
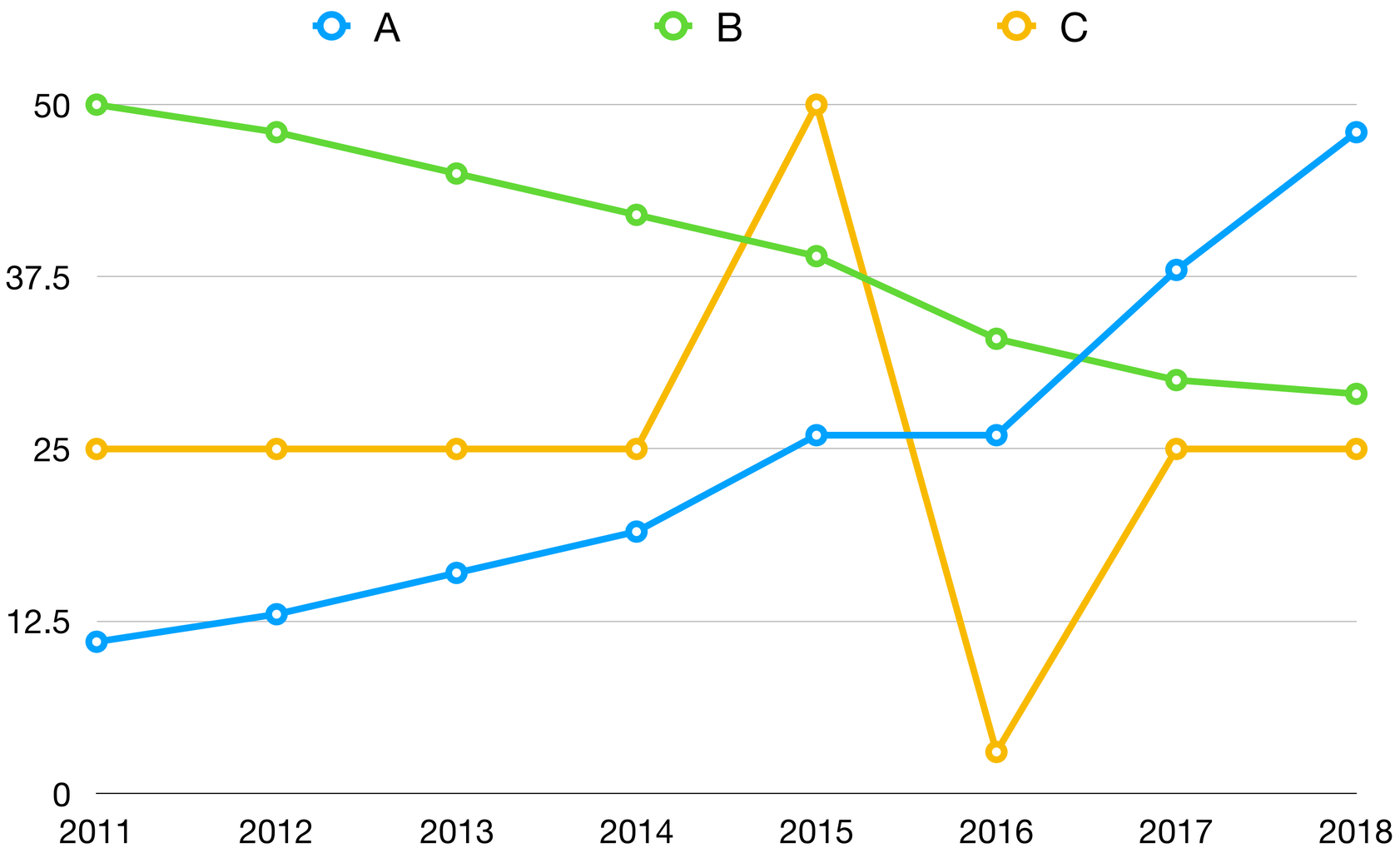
Let’s Graph Data

Why do we present graphs visually?

Yr	A
2011	11
2012	13
2013	16
2014	19
2015	26
2016	26
2017	38
2018	48

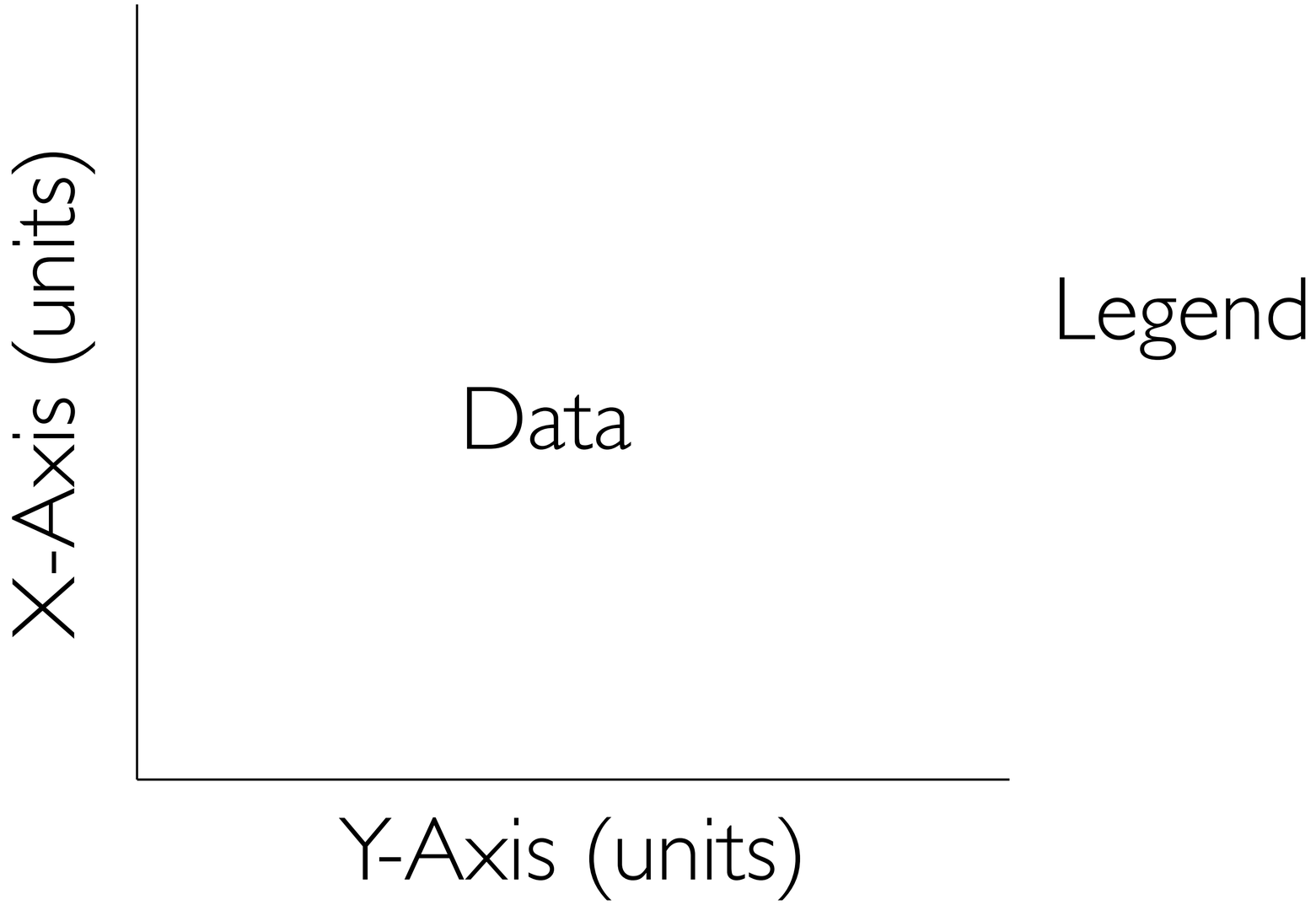


Yr	A	B	C
2011	11	50	25
2012	13	48	25
2013	16	45	25
2014	19	42	25
2015	26	39	50
2016	26	33	3
2017	38	30	25
2018	48	29	25



What's the anatomy of a "finished" graph?

Title and/or figure caption



What does data look like?

Three kinds of data:

Continuous Data

Ordinal Data

Categorical Data

Three kinds of data:

Continuous Data: Quantitative data that can be measured. It has an infinite number of possible values within a selected range.

Three kinds of data:

Categorical Data: Qualitative data that groups datapoints together by some attribute.

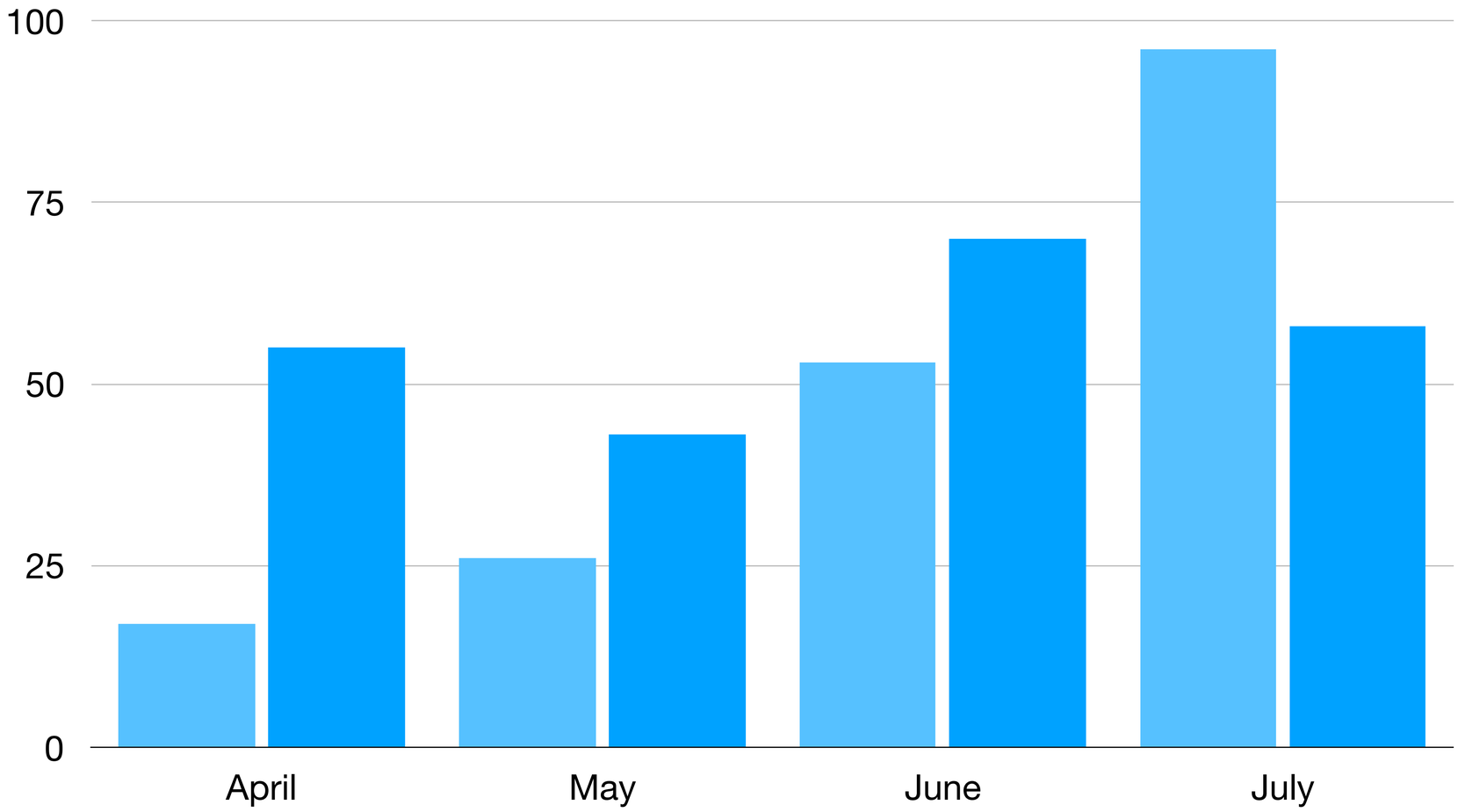
Three kinds of data:

Ordinal Data: Is categorical data where the variables have natural, ordered categories.

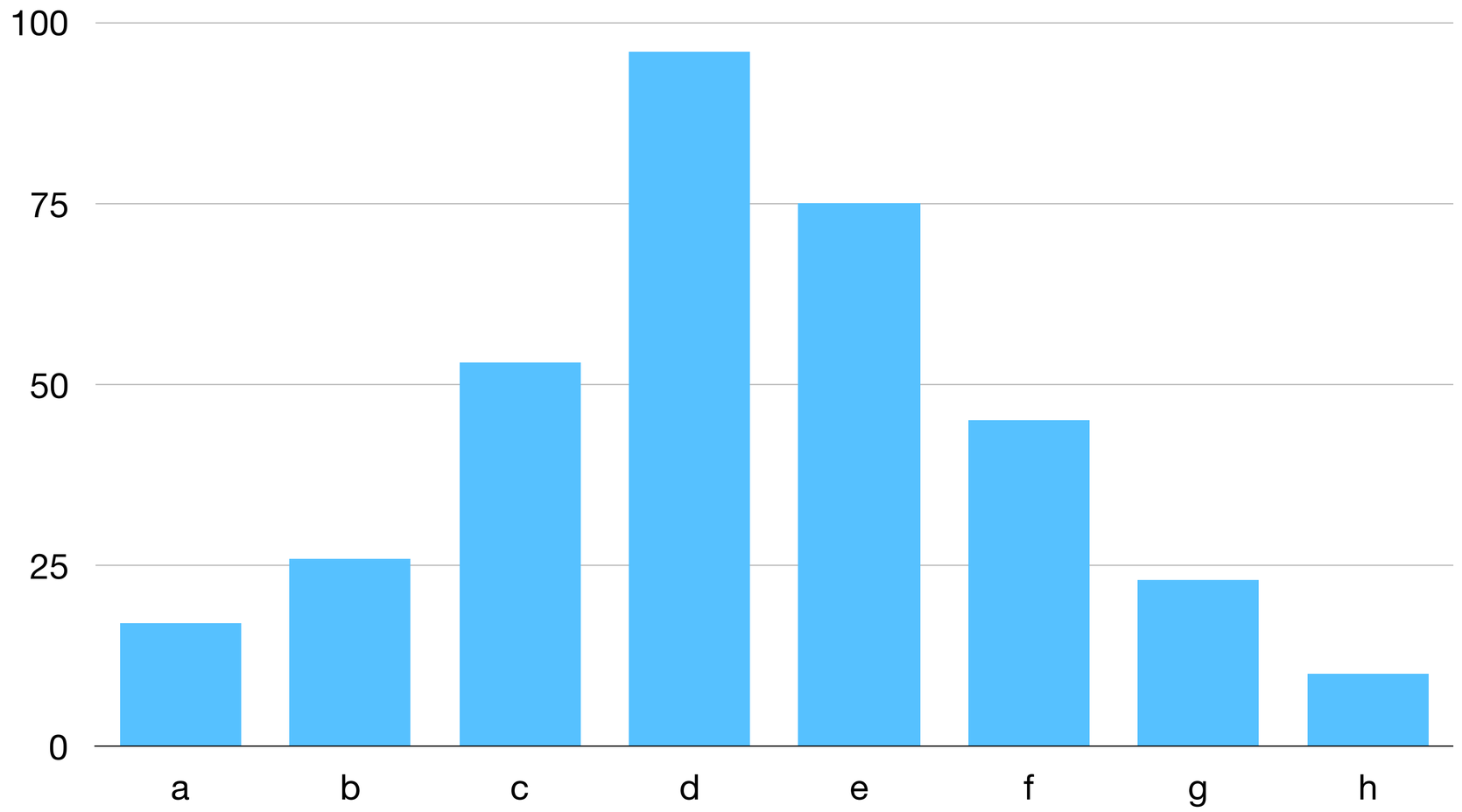
Different types of data are visualized differently.

Name some kinds of charts

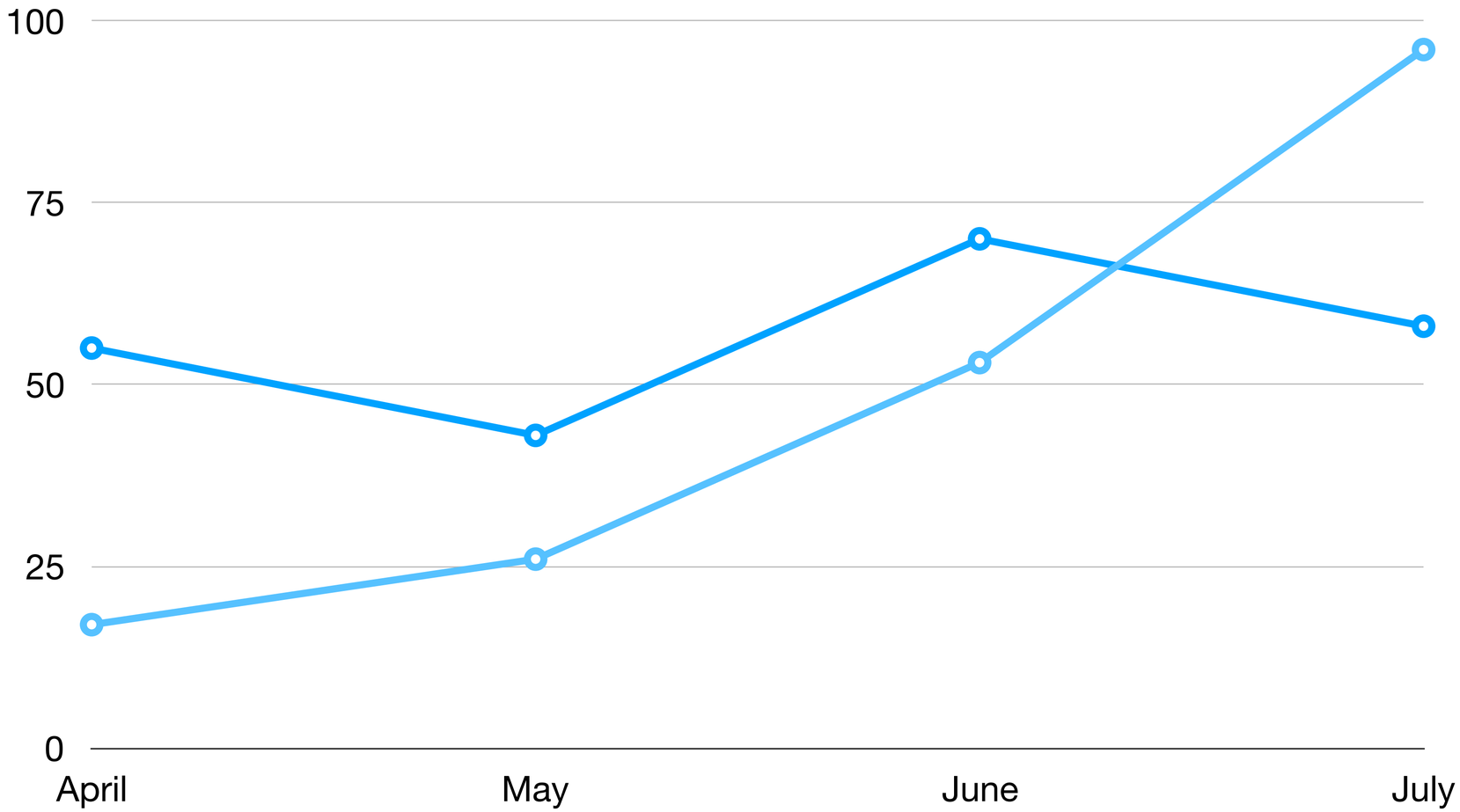
Bar Chart



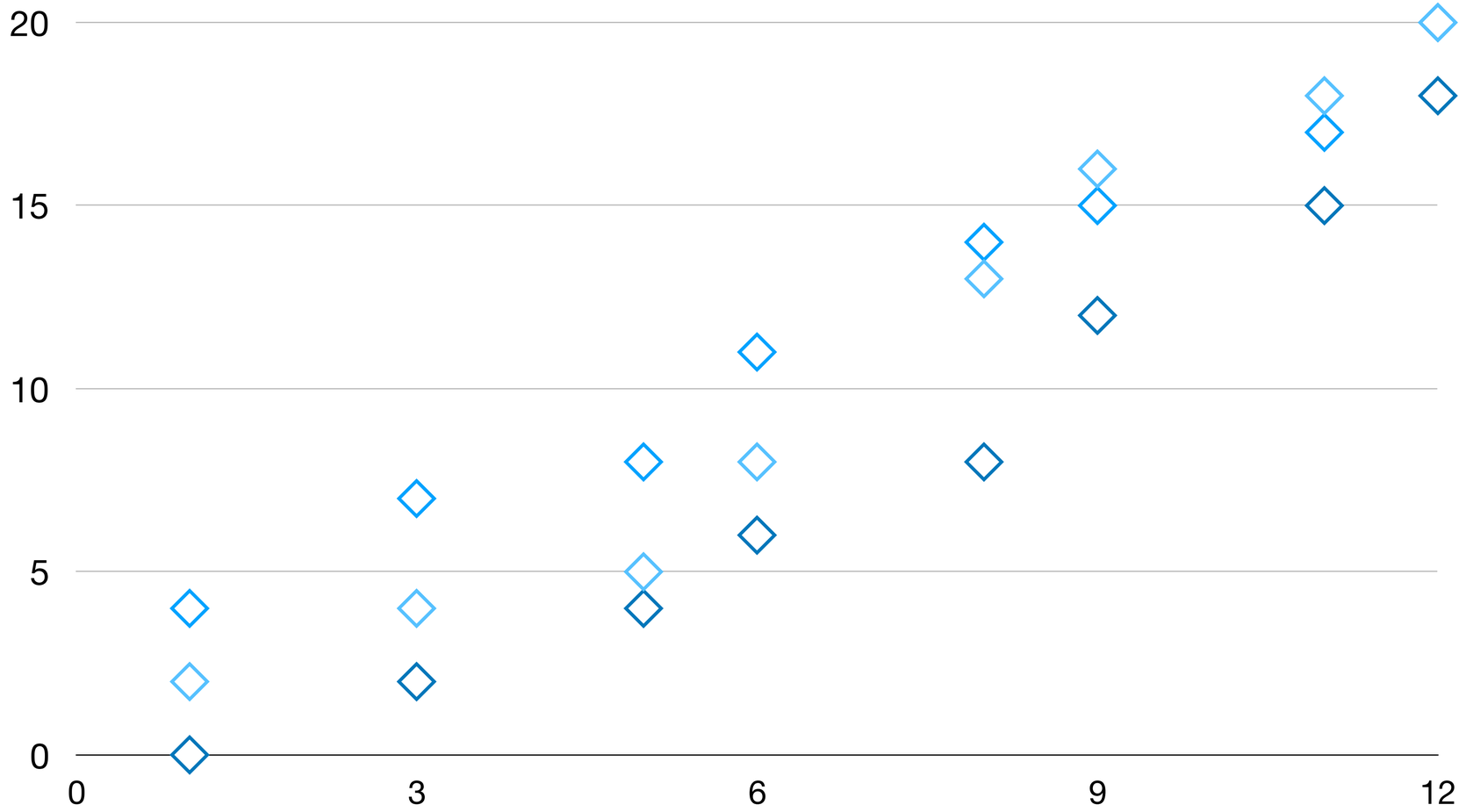
Histogram



Line Chart



Scatter Plot



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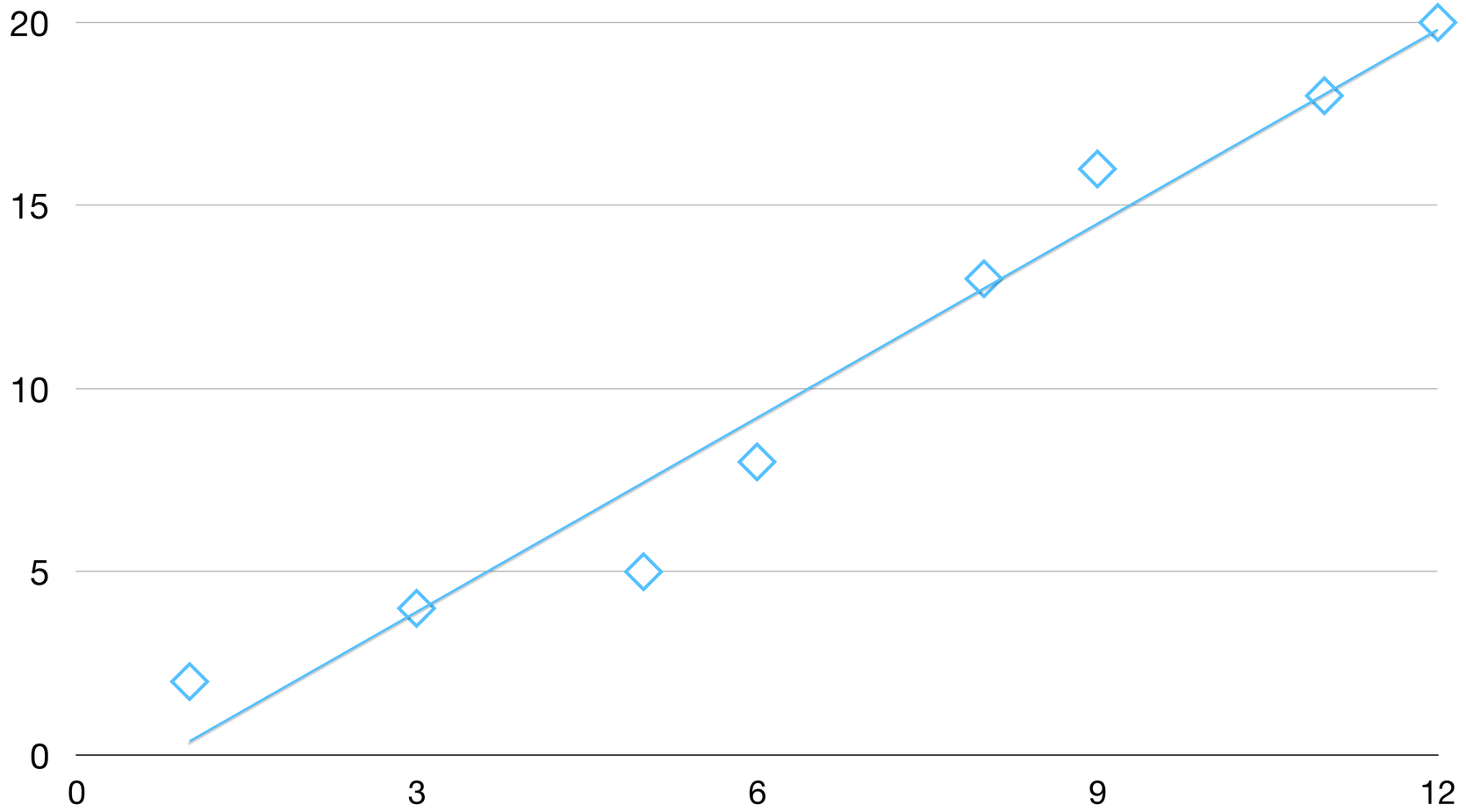
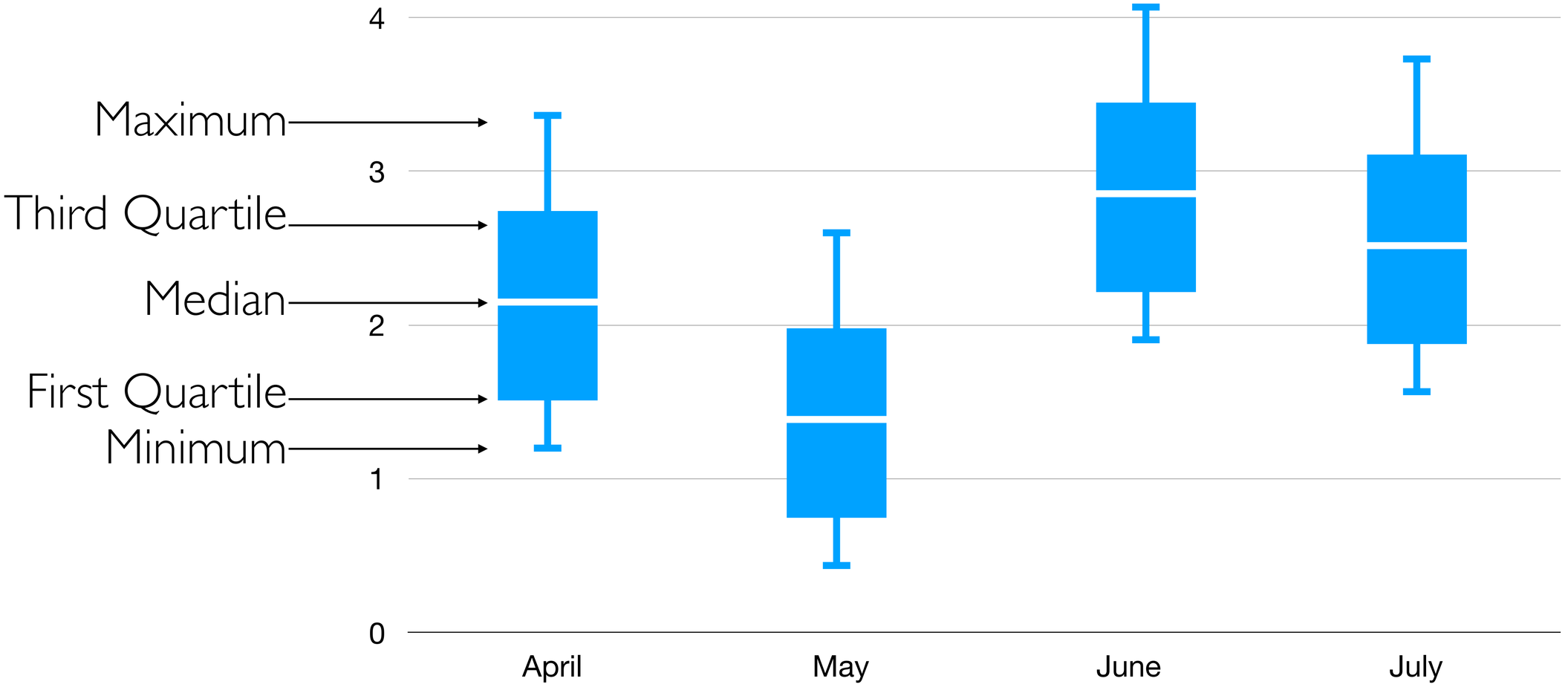
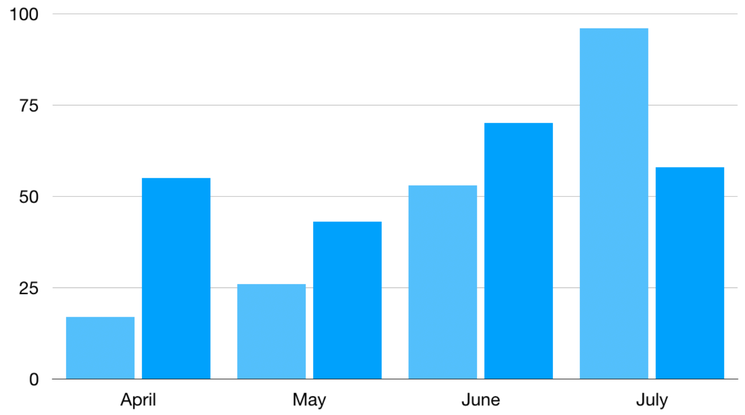


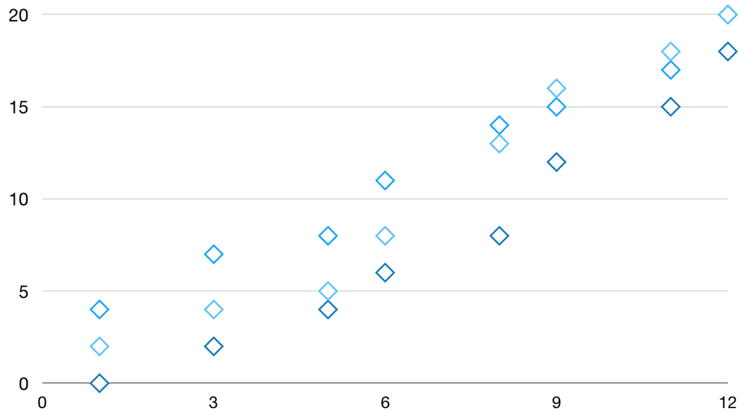
Box and Whisker



Bar Chart



Scatter Plot



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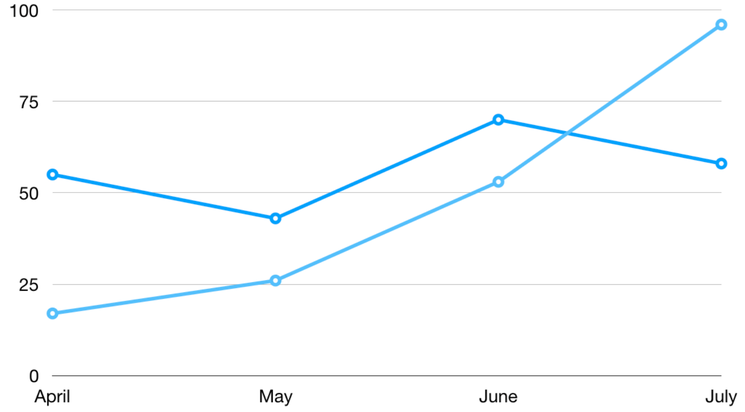
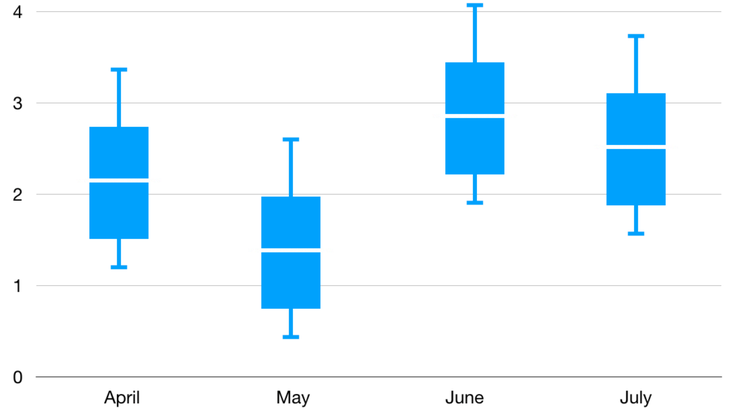
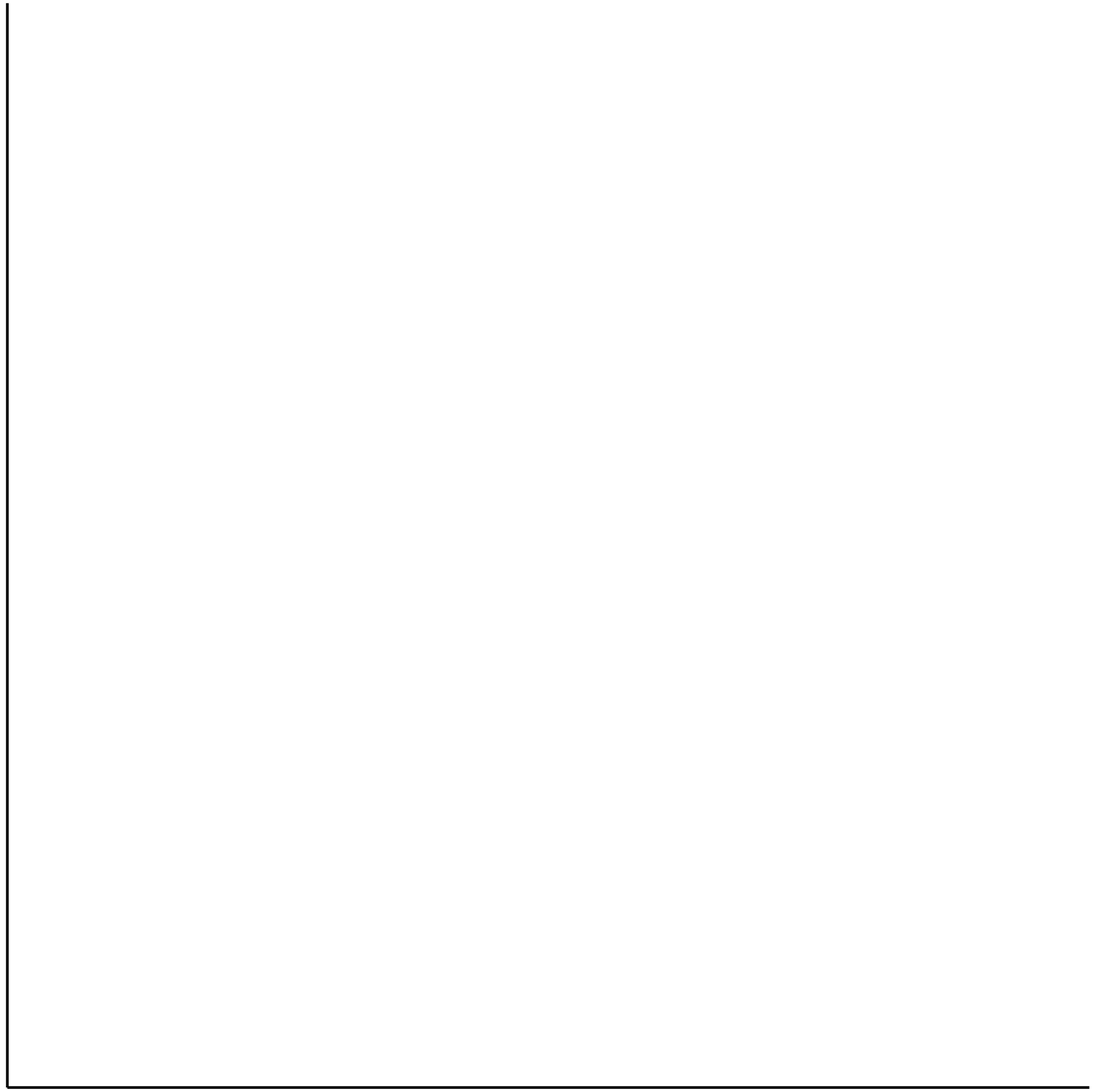


Box and Whisker



Let's Try!

	Trait A	Trait B
Black	17	8
Black	1	19
Grey	7	16
Black	16	8
Grey	18	5
Grey	2	18
Black	4	17
Black	11	11
Grey	15	3
Grey	4	14
Black	7	9
Black	5	13
Grey	13	20
Black	6	10
Grey	10	6
Grey	20	1



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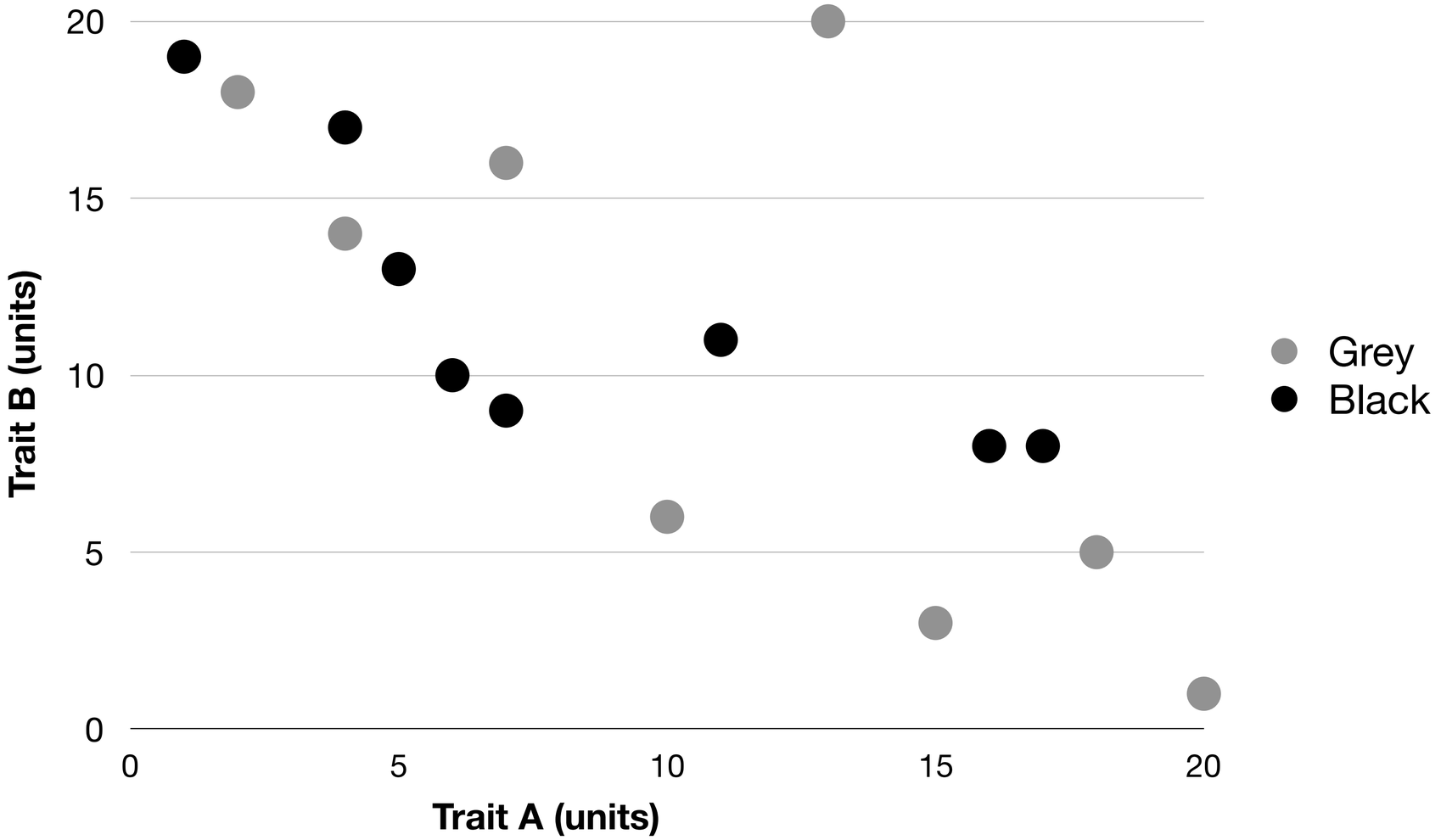
Black	11	11
Grey	15	3
Grey	4	14
Black	7	9
Black	5	13
Grey	13	20
Black	6	10
Grey	10	6
Grey	20	1

Figure 1: The relationship between trait and and trait b seems to be negative for both black and grey.



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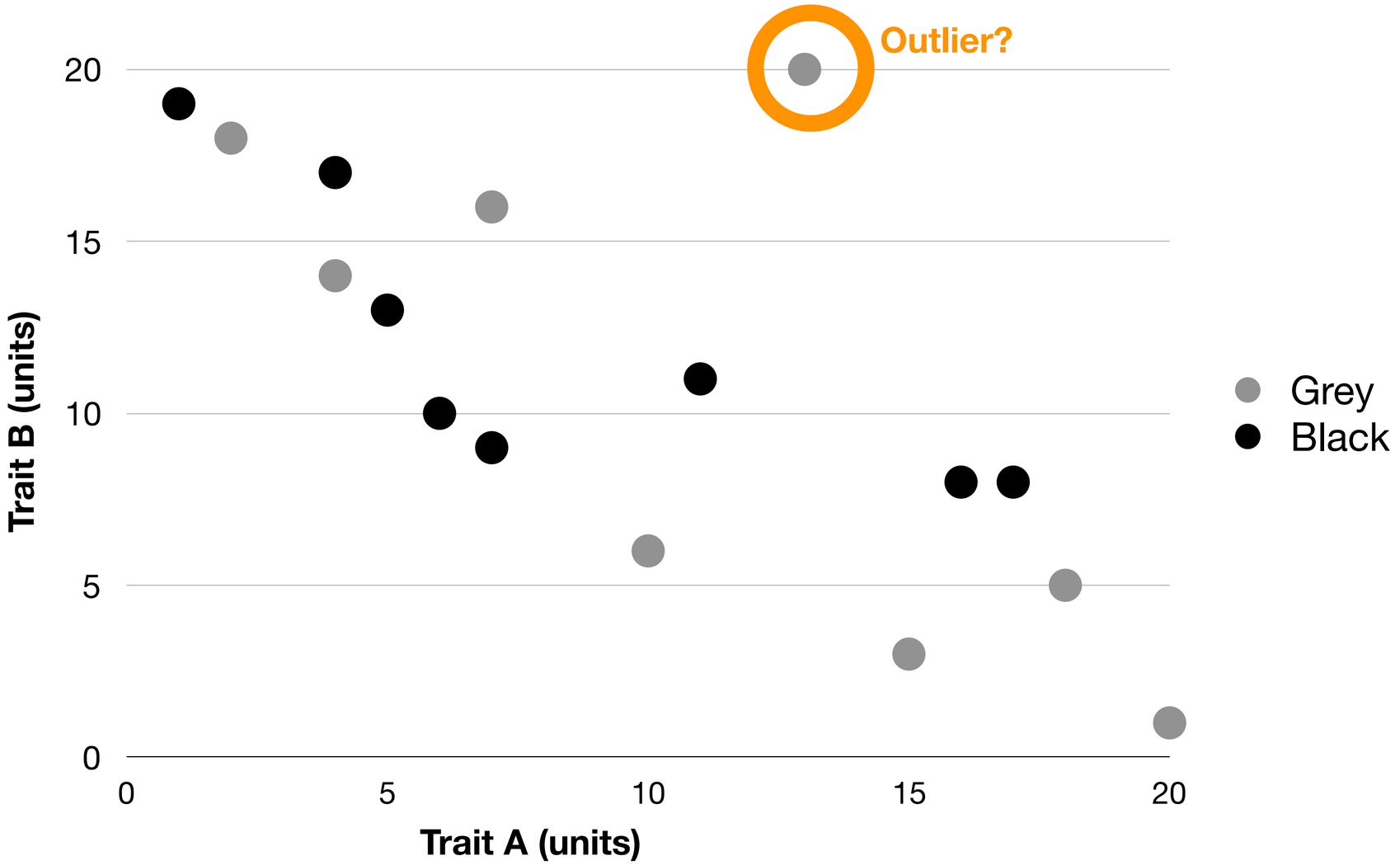
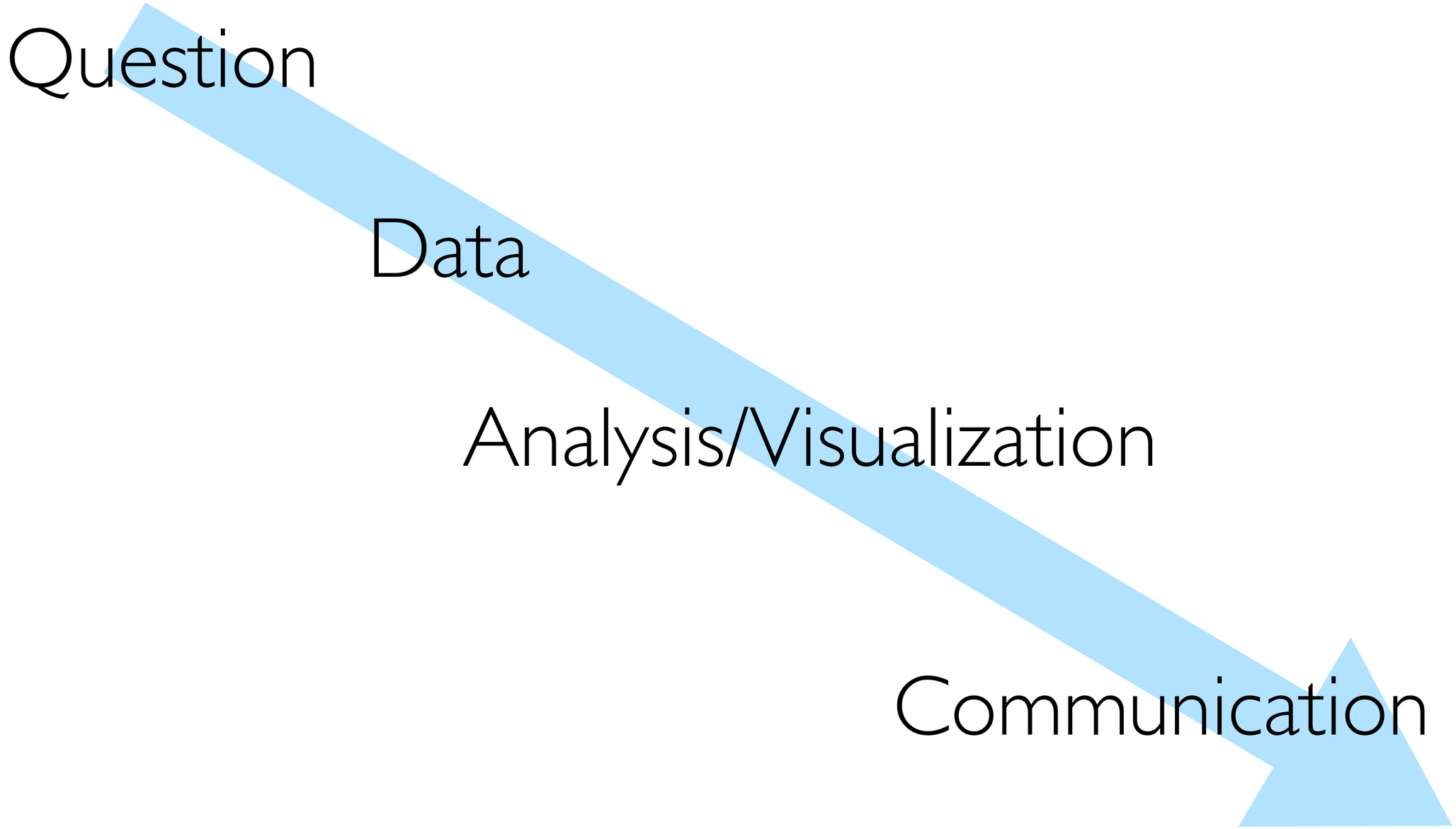


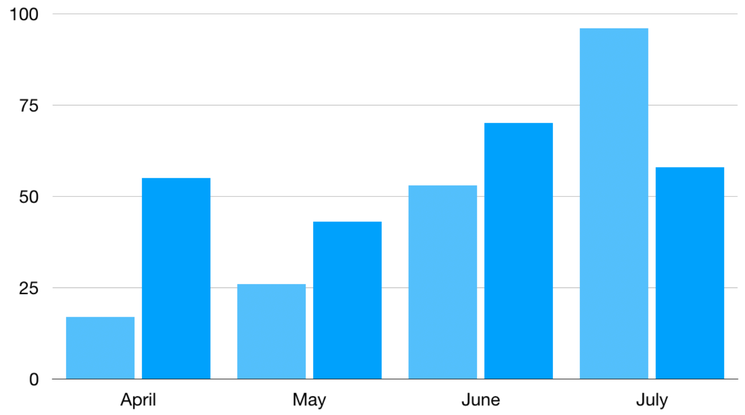
Other things to remember:

Always know what question your graph is trying to answer!

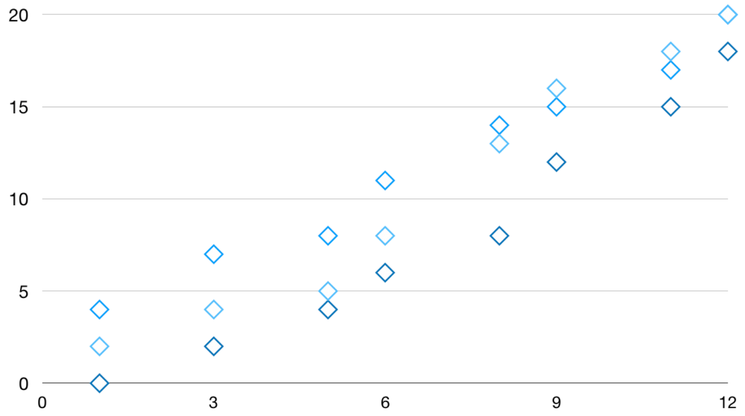

Question
Data
Analysis/Visualization
Communication

ΠΕΤΡΟΣ Λ.Π 1205

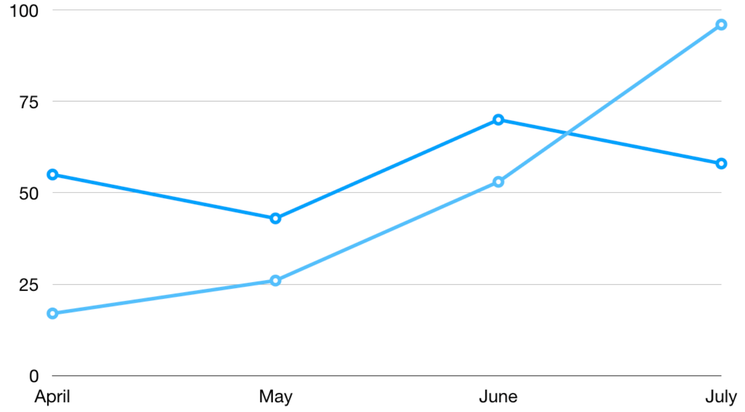
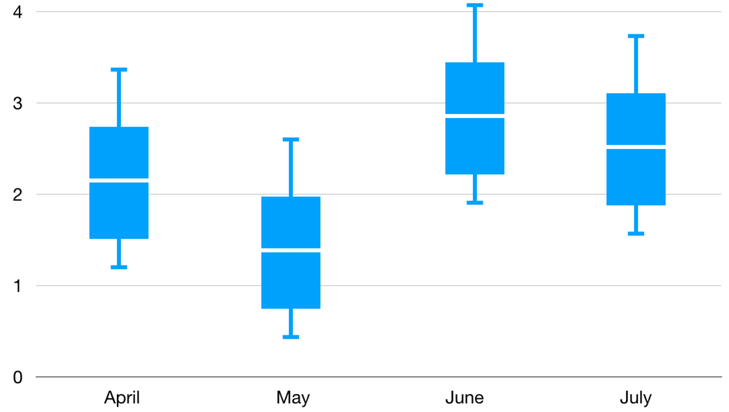
Bar Chart



Scatter Plot



Line Chart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