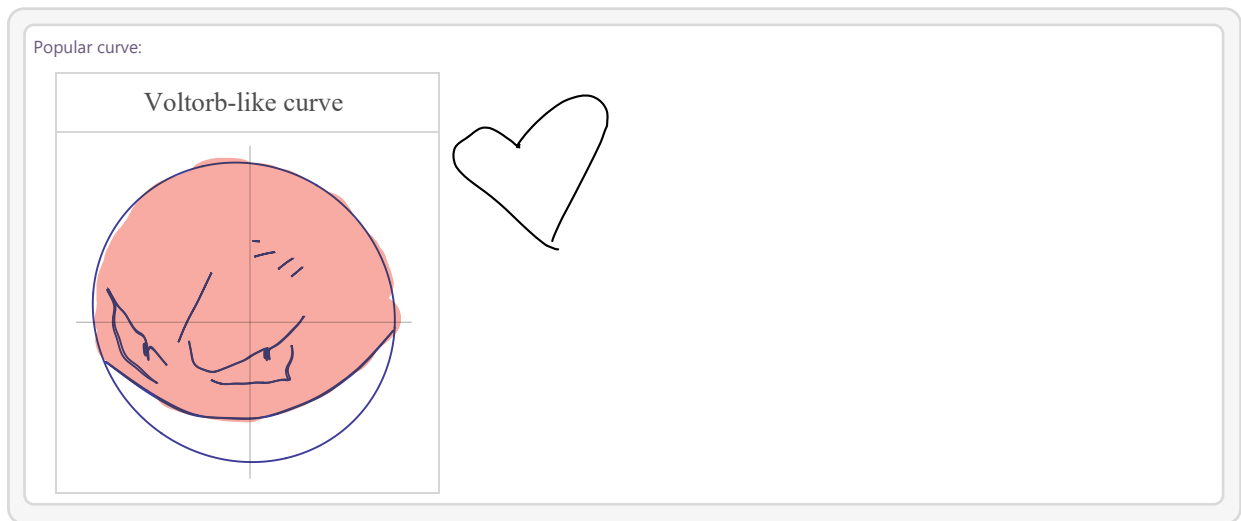


# MATH:1260 Pokémath

## The Mathematics of Pokémon Go<sup>®</sup>

Week 5 Wednesday, Spring 24



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## Plan for Today

- Communicating math
- Different graphs for different situations

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## Class Reminders

- Thursday discussion will be work time.
  - Chance for extra credit! *+3 points*
- Project 1, Stage 2 due tonight at midnight.
- Project 1, Stage 3 due Wednesday Feb 21 at midnight.

## Notation Debrief

- Communication! How can you be sure your reader knows your notation?

- Brief, easy to write, simple, legible.
- Unique, can't be confused for something else, unambiguous.
- Visually reminds the reader of the meaning.

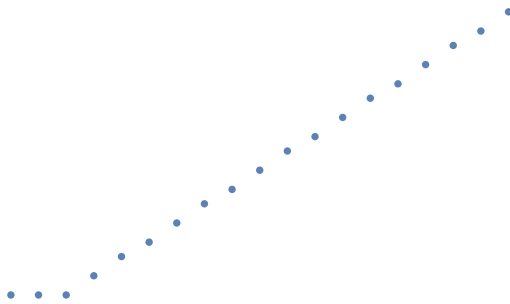
We collected 20 Bulbasaur

{ Bulbasaur | In our bag } = Bulbasaur caught for project  
 - Too long, hard to read, overly specific

{ Bulbasaur | In our bag } =  $\beta$   
 - Meets all 3 suggestions

## Strategies for Visualization

What does this graph represent?

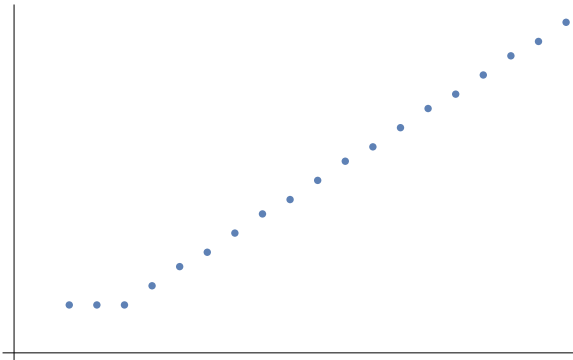


No context

No information

## Strategies for Visualization

How about this one?



Labels?

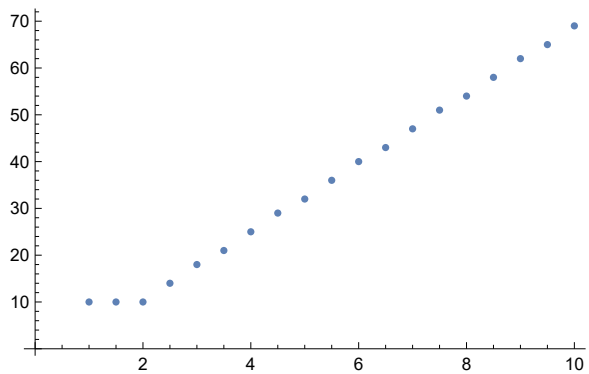
Values on the axis?

Units?

Title?

## Strategies for Visualization

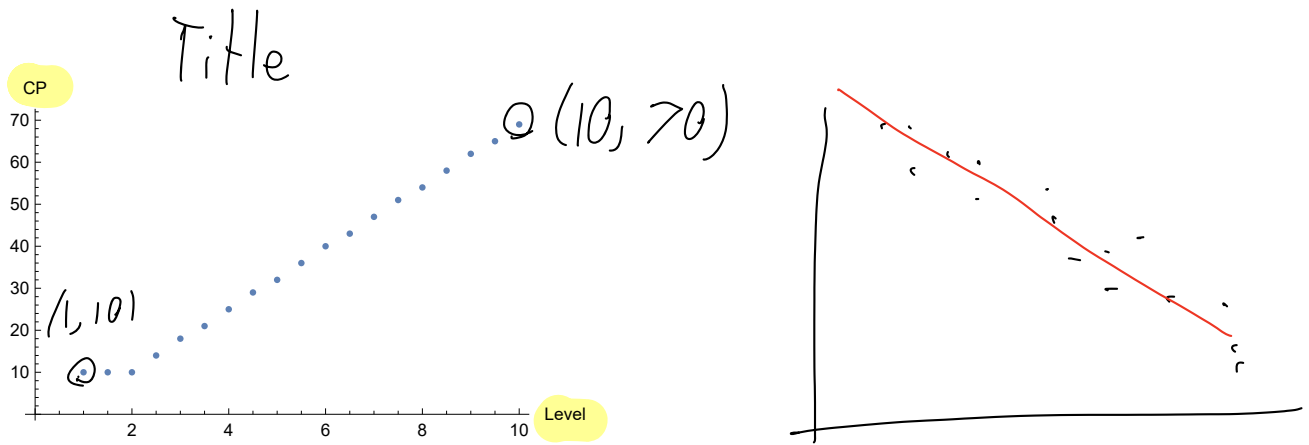
Now?



Don't make your reader solve a riddle,

## Strategies for Visualization

We're getting somewhere!

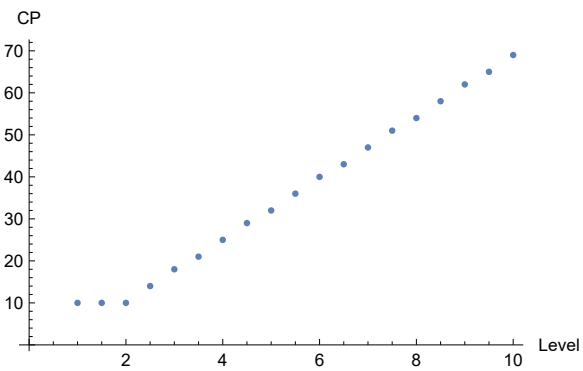


This graph may be “good enough” but what else could we add? To the graph? To a paragraph describing the graph?

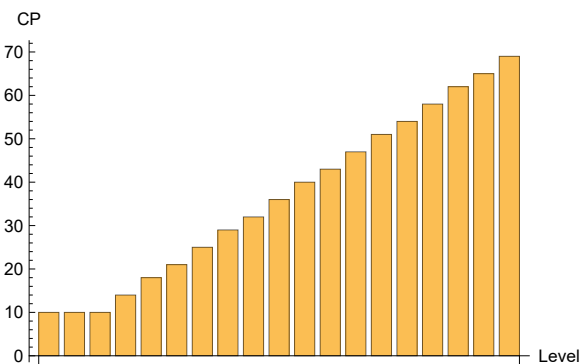
trend line?  
Label specific points?  
units?

## Many Types of Graphs (Pros? Cons?)

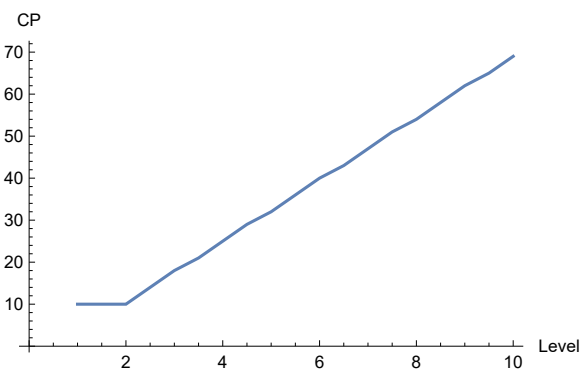
### Scatter Plot



### Bar Graph

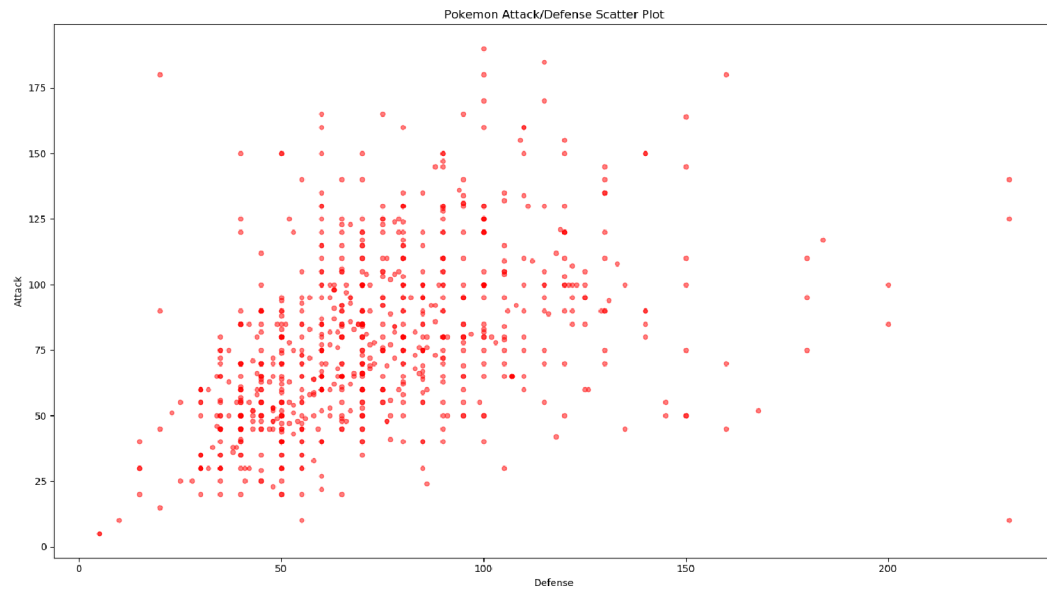


### Line Graph





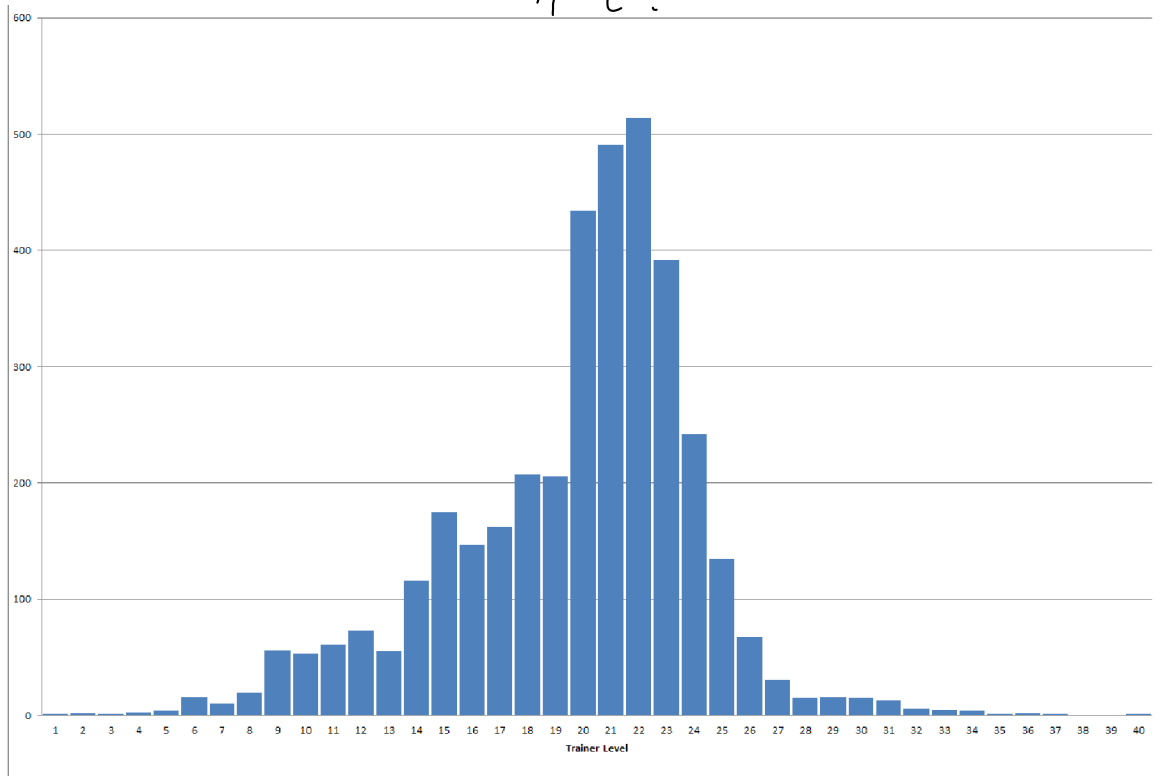
## Good Examples (Top Hat)



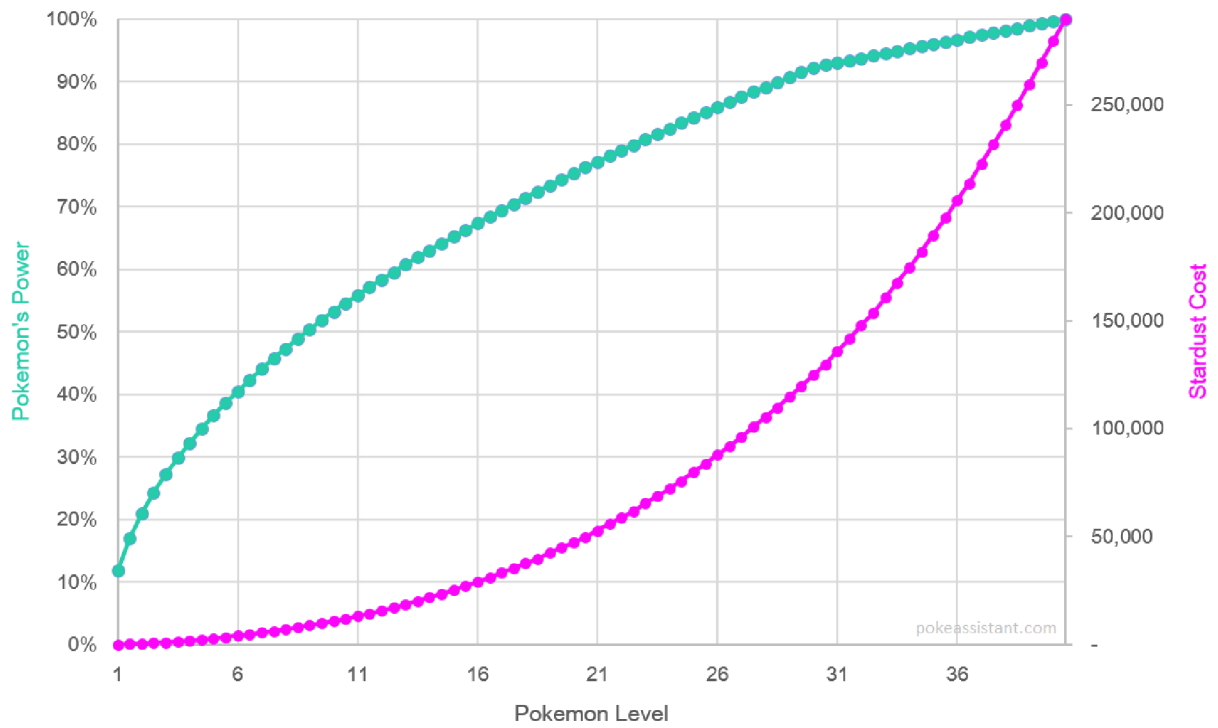
outlier - a point on a scatter plot far away from the grouping.

## Good Examples

title?



## Good Examples



## Some Definitions

**Discrete** Graph - A graph is said to be discrete if it shows **distinct** and **separate** data.

Examples?

scatter plot

bar graph

**Continuous** Graph - A graph is said to be continuous if it shows the data points **connected along a line**, even if no specific data was gathered at every individual point on the line.

Examples?

line graph

trend line on top of a discrete graph

Which one is best for your Research Project?

Up to you!

Pokemon	CP	Pokeball
Magikarp/		
2		
3		
4		

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## Venn Diagrams

We need the same detail with Venn Diagrams:

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## Venn Diagrams

Be careful when choosing your sets for your Venn Diagram! Make sure your diagram actually communicates something!