DISCRETE DATA

Exact Numbers!

Remember, discrete data is that which takes EXACT VALUES!

2 values can be identical

Examples…

Amount of Jelly Beans eaten by each person at a 6 person birthday party — Discrete

{ 0 , 1 , 4 , 7 , 4 , 6 }

"Data Set"

Number of Pens in each person's pencil case of a 4 person classroom — Discrete

{ 1 , 5 , 7 , 5 }

The height of each person in a 5 person soccer team — Not Discrete

{ 168.2cm , 169.3cm , 174.2cm , 190.2cm , 158.4cm }

No 2 values can be EXACTLY the same.
E.g., 2 people can't be exactly the same height.

So what do we do with discrete data?

We organise it often in tally's or frequency tables!

For Example, take the following data set which represents #movies watched on the weekend for every person in your 25 member classroom!

{ 1 , 2 , 3 , 1 , 2 , 4 , 4 , 5 , 5 , 6 , 4 , 2 , 3 , 3 , 4 , 4 , 5 , 6 , 7 , 3 , 4 , 5 , 6 , 4 , 7 }

This data can be organised into a tally or a frequency table

#Movies watched	Tally
1	II
2	III
3	IIII
4	IIII-II
5	IIII
6	III
7	II

This reads…
"2 people watched 1 movie"

#Movies watched	Frequency
1	2
2	3
3	4
4	7
5	4
6	3
7	2

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DISCRETE DATA

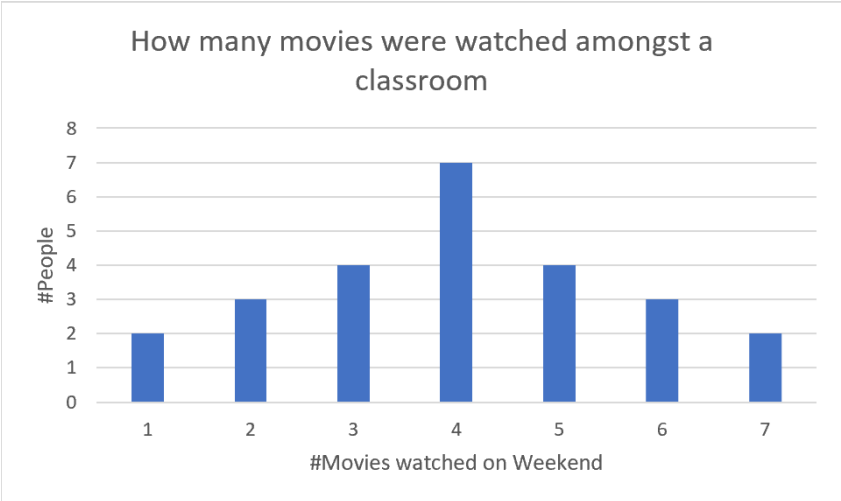
Exact Numbers!

Can we do more?...

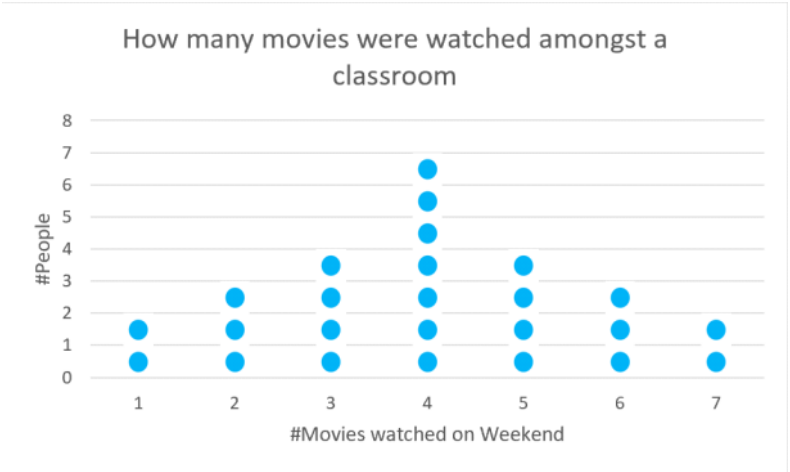
Discrete data is often displayed onto column graphs or dot-plots

Displaying the data on the previous example yields…

Column Graph



Dot-Plot



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DISCRETE DATA

Exact Numbers!

Large data sets??

Sometimes if we have a large amounts of discrete data, we can use "class intervals"

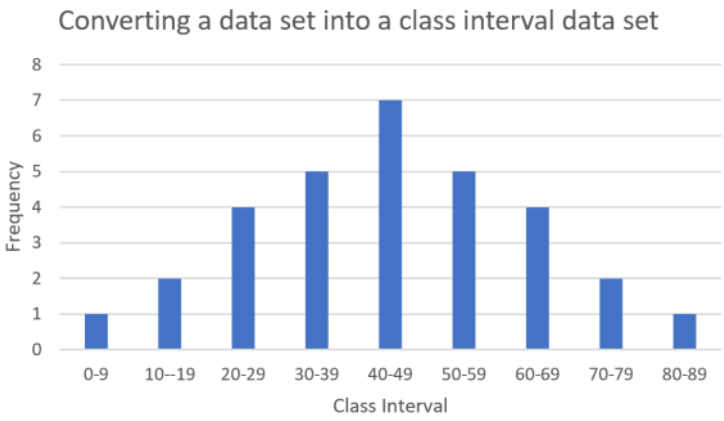
Consider the following large data set…

{ 1 , 11 , 13 , 23 , 26 , 27 , 28 , 31 , 35 , 37 , 38 , 39 , 41 , 42 , 43 , 44 , 45 , 47 , 49 , 52 , 53 , 54 , 57 , 59 , 63 , 61 , 62 , 69 , 72 , 73 , 81}

This data set can be converted into a frequency table with class intervals of width "10"

Interval	Frequency
0-9	1
10-19	2
20-29	4
30-39	5
40-49	7
50-59	5
60-69	4
70-79	2
80-89	1

Plotting this as a column graph can be done below



"modal class = 40-49"

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