

# Reshaping and aggregating data

DATA TRANSFORMATION IN POWER BI



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# Understanding dataset shapes

- Long Data Structure
  - Repeating values in first column
  - Usually only one numerical column
  - Easier for computer to interpret
- Wide Data Structure
  - Unique values in first column
  - Multiple numerical columns
  - More human-readable

**Long Format**

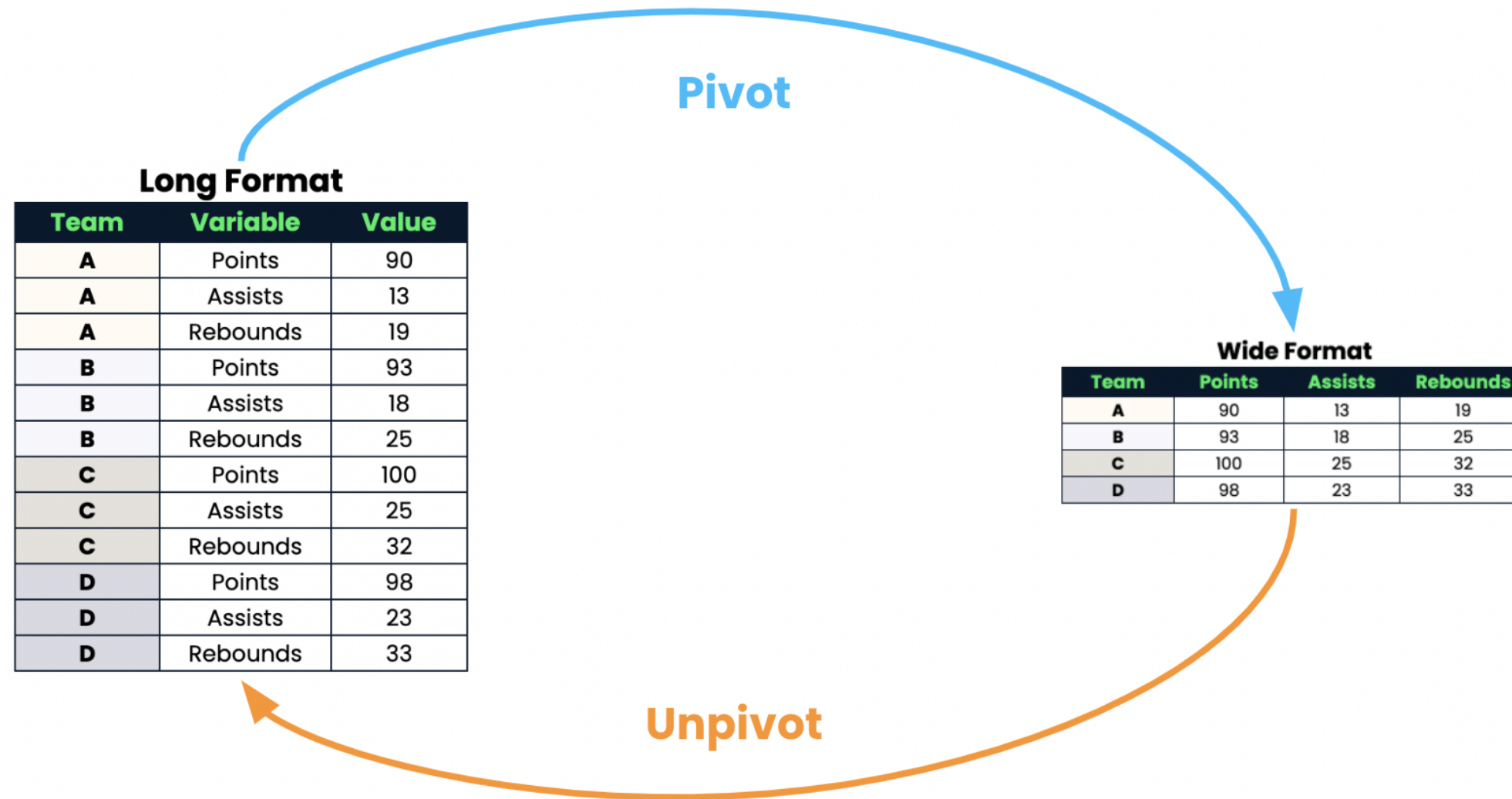
Team	Variable	Value
A	Points	90
A	Assists	13
A	Rebounds	19
B	Points	93
B	Assists	18
B	Rebounds	25
C	Points	100
C	Assists	25
C	Rebounds	32
D	Points	98
D	Assists	23

**Wide Format**

Team	Points	Assists	Rebounds
A	90	13	19
B	93	18	25
C	100	25	32
D	98	23	33

<sup>1</sup> Data can be represented in different ways through different dataset shapes

# Transforming data shape



- To transform from long to wide, we pivot our data
- To transform from wide to long, we unpivot our data

# Transforming data shape

- Transposing changes your rows into columns and your columns into rows

A	B	C	D	E
Units Sold	North	South	East	West
Monday	73	86	92	69
Tuesday	70	96	66	60
Wednesday	71	85	97	65
Thursday	63	72	52	51
Friday	72	83	53	71
Saturday	55	62	69	51
Sunday	99	61	93	78

Transpose

A	B	C	D	E	F	G	H
Units Sold	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
North	73	70	71	63	72	55	99
South	86	96	85	72	83	62	61
East	92	66	97	52	53	69	93
West	69	60	65	51	71	51	78

# Aggregating with group by transformation

- Grouping changes the granularity of your dataset
- After choosing a granularity (groups) you apply an aggregation such as:
  - Sum
  - Average
  - Median
  - Min / Max
  - Count
  - Custom aggregation

Day	Week	Sales
1	1	700
2	1	515
3	1	994
4	1	646
5	1	638
6	1	731
7	1	826
8	2	578
9	2	821
10	2	652
11	2	757
12	2	665
13	2	924
14	2	603
15	3	859
16	3	862
17	3	755
18	3	674
19	3	772
20	3	623
21	3	886
22	4	753
23	4	704
24	4	859
25	4	827
26	4	814
27	4	944
28	4	574
29	5	762

Week	Total Sales	Average Sales
1	5,050	721
2	5,000	714
3	5,431	776
4	5,475	782
5	1,322	661

# Let's practice!

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# Reshaping and aggregating tables in Power Query

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# Let's practice!

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