

# Note & Disclaimer

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# ANOVA in Excel

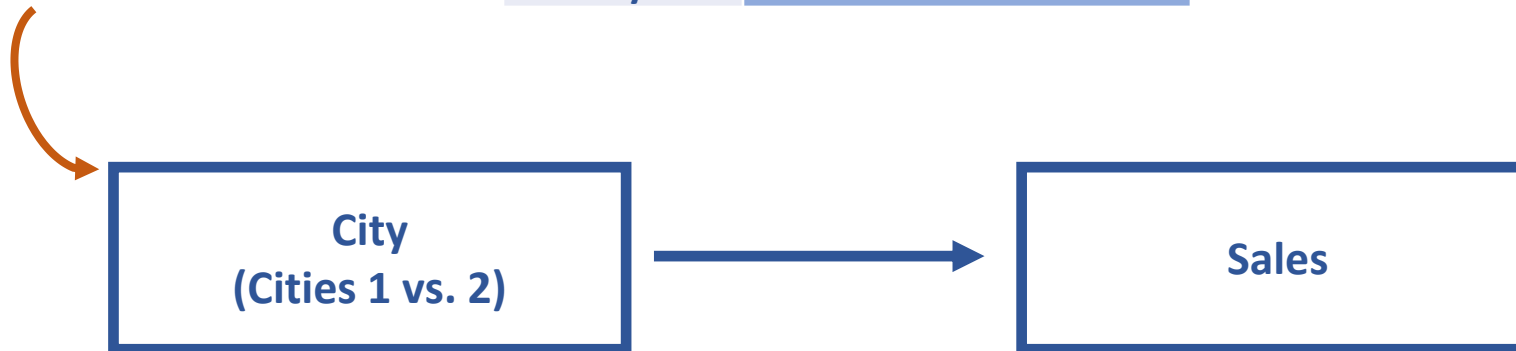
**What are the differences between**

- (1) ANOVA: Single factor,**
- (2) Two-factor with replication, and**
- (3) Two-factor without replication?**

# ANOVA: Single Factor

City	Ice Cream Sales (Unit)
City1	30
City1	70
City1	60
City1	100
City1	130
City2	20
City2	9
City2	16
City2	9
City2	6

*"City" is the factor*



# ANOVA: Two-Factor with Replication

Factor 2: Brand

Factor 1: City		Brand A	Brand B
	City1	10	20
	City1	20	50
	City1	30	30
	City1	20	80
	City1	30	100
	City2	10	10
	City2	5	4
	City2	12	4
	City2	5	4
	City2	3	3

*"City" is one factor*

*"brand" is another factor*

City (cities 1 vs. 2) ×  
Brand (A vs. B)

Sales

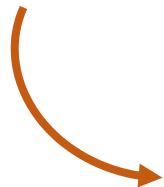
## ANOVA: Two-Factor with Replication

		Factor B: Brand	
		Brand A	Brand B
Factor A: City	City1	10	20
	City1	20	50
	City1	30	30
	City1	20	80
	City1	30	100
	City2	10	10
	City2	5	4
	City2	12	4
	City2	5	4
	City2	3	3

## ANOVA: Two-Factor without Replication

		Factor B: Brand	
		Brand A	Brand B
Factor A: City	City1	10	20
	City2	5	4

"City" is one factor  
"brand" is another factor



City (cities 1 vs. 2) ×  
Brand (A vs. B)



Sales