

Lecture 3
Comparisons

English for Mathematics

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Review

We use:

- Simple Present Tense to talk about habits, daily routines, schedules, and facts.
- Present Progressive Tense to talk about something happening/ not happening right now, current trends, still happening at the time of speaking, and temporary situations.

Course Objectives & Expectations

By the end of this session, students will be able to:

1

Use comparative, superlative, and equative structures in mathematical contexts.

2

Compare mathematical objects, values, or measurements accurately.

3

Form correct sentences to describe differences in size, quantity, or shape.



Comparisons

Brainstorming

Are you familiar with these signs?



We've seen the signs in mathematic operations like these:

- $7 = 10 - 3$

Seven is equal to ten minus three

- $9 + 6 \neq 13$

Nine plus six is not equal to thirteen

- $7 < 17$

Seven is less than seventeen

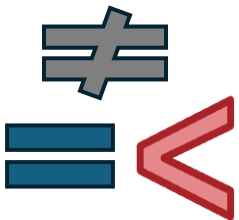
- $13 > 5$

Thirteen is greater than five

Comparisons

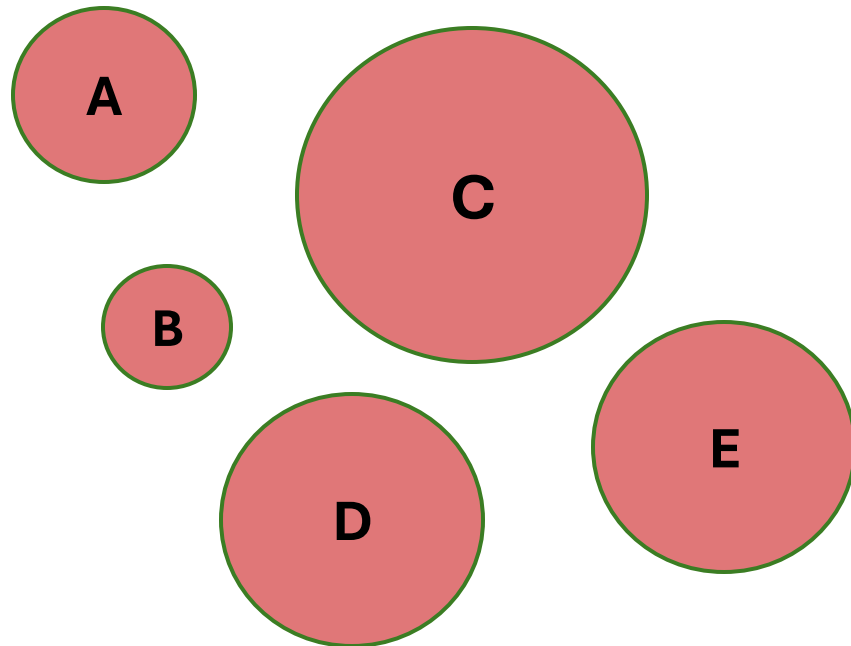
- The signs which express **equality** or **inequality** ($=$, \neq , $<$, $>$) are called **relation symbols** because they indicate how two expressions are related.
- While the **symbol** $=$ in an arithmetic sentence means *is equal to*, another **symbol** \neq , means *is not equal to*.
- To know which of the two numbers is greater let us use the conventional symbol $<$ and $>$, where $<$ means *is less than* while $>$ means *is greater than*.

(Grechina & Mironova, 1974).



Comparisons

- Using bahasa Indonesia, can you make comparisons based on this image?

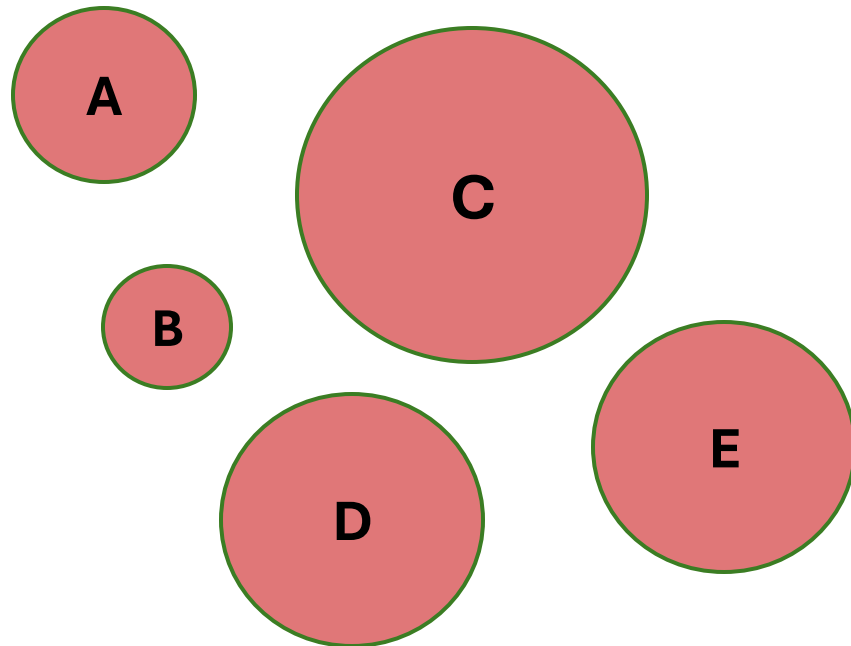


kata sifat

- 1) Lingkaran C lebih **besar** daripada Lingkaran D.
- 2) Lingkaran B adalah lingkaran yang paling **kecil**/ ter**kecil**.

Comparisons

- Let's do the same in English.



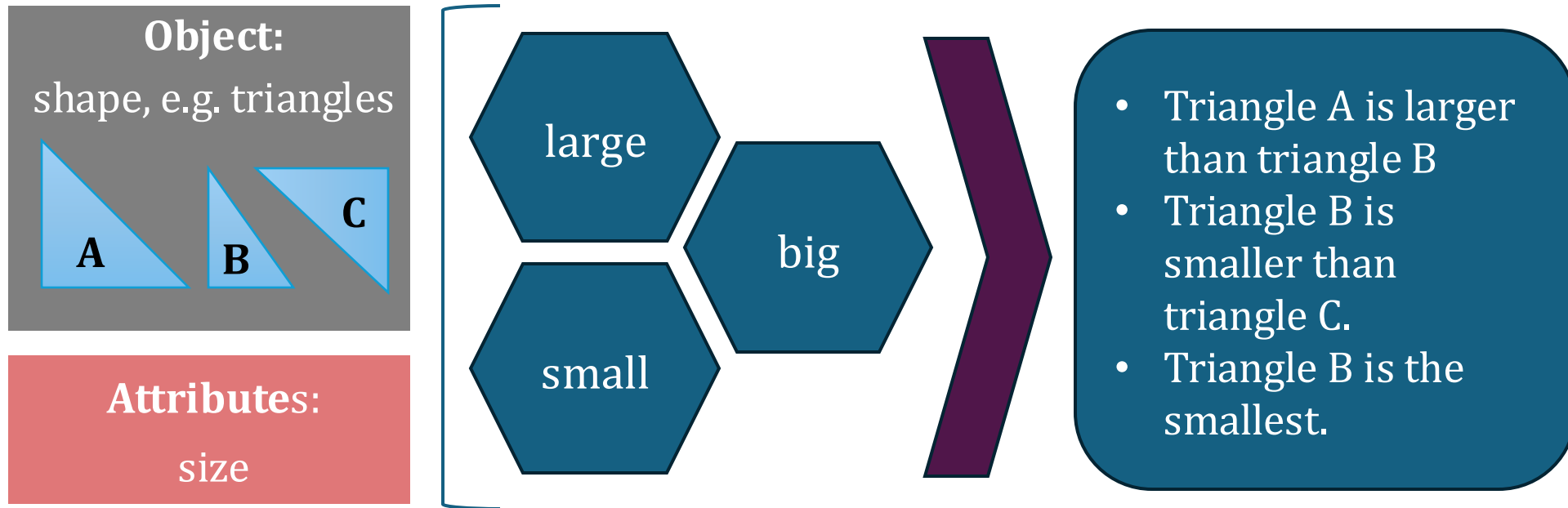
- We can say:
 - 1) Circle C is **bigger** than Circle D.
 - 2) Circle B is the **smallest**.
- What part of speech do we use to compare?

adjective

Comparisons

Therefore, when we want to make comparisons using English, think of:

- What attribute(s)/ feature(s) of the objects can we compare?
- What is the adjective(s) can we use to compare the attributes/ features?



Comparisons

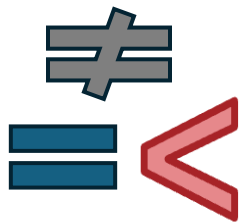
In English, making comparisons can be done using some structures:

- 1 Comparative adjectives
- 2 Superlative adjectives
- 3 Equative adjectives

Comparatives

Comparative adjectives are used to compare two things. They can either be formed by adding the suffix “-er,” or by putting “more” or “less” before the adjective.

(Azhar, 2003; Hall & Barduhn, 2016)

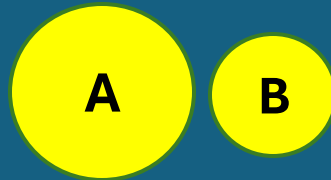


Functions

WHEN TO USE?

Used to compare two things (Azhar, 2003; Hall & Barduhn, 2016), e.g.

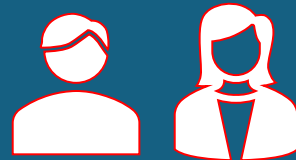
- Circle A and Circle B



- Reputation of business 1 and business 2.



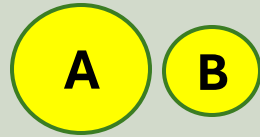
- Student X and student Y.



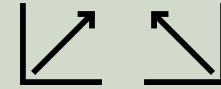
Formula

HOW TO USE?

- Adjectives + er + than (for most 1-syllable adjectives), e.g.
Circle B is **smaller** than Circle A.



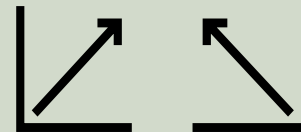
- More/ less than + adjectives (for most 2-syllable adjectives), e.g.
Company A is **more famous** than company B.



- When the adjective ends in -i sound, you add +er, e.g.
Student X is **friendlier** than student Y.



- More/ less than + adjectives (for long adjectives), e.g.
Company A is **more successful** than company B.



Formula

HOW TO USE?

There are different rules for forming comparatives depending on the ending of the simple form of the adjective.

- If the adjective ends in “-e,” just an “-r” is added.

close → closer

- For some adjectives ending in “-y,” the “-y” is removed and “-ier” added.

early → earlier

- For single-syllable adjectives ending consonant-vowel- consonant, the final letter is doubled and “-er” added.

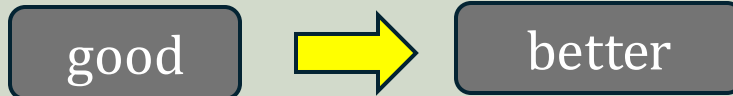
big → bigger

Formula

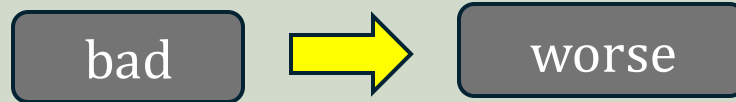
HOW TO USE?

Some common adjectives have irregular comparatives.

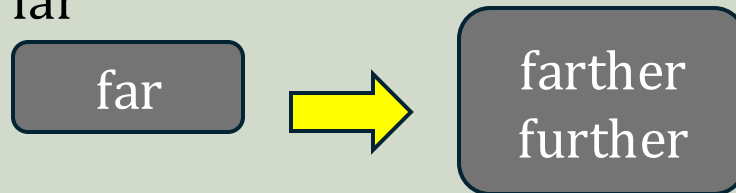
- good



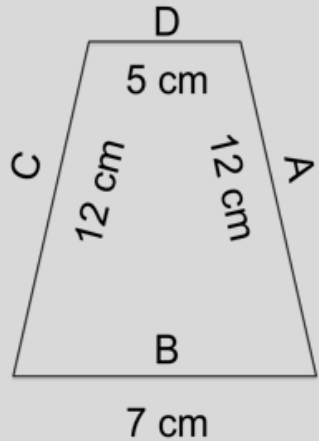
- bad



- far



Tips and examples



You are given this image then asked to make comparative sentences.

- What attribute(s) would you like to compare? **LINE.**
- What adjective(s) can you use to compare the attribute? **LONG, SHORT**
- How many syllables are LONG/ SHORT? 1 syllable. So, you need to add -er after the adjectives.

Therefore, your comparatives can be as follow:

- Line C is **longer** than line D.
- Line D is **shorter** than line B.

More Examples

- The average of students' passing grade in Spring 2024 was 85%.
- The average of students' passing grade in Fall 2024 was 90%.



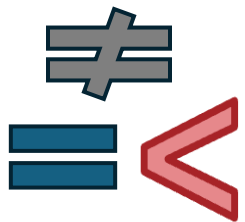
- What attribute(s) can we compare? **Percentage**
- What adjective(s) can we use to compare the attribute? **high, low**
- How many syllables are **high/ low**? 1 syllable. So, you need to add -er after the adjectives.



The average of students' passing grade in Spring 2024 was **lower** than in Fall 2024.

Superlatives

Superlative adjectives, such as “the biggest” or “the smallest,” are used to talk about extremes. Long adjectives take “most” and “least” to show an extreme (Azhar, 2003; Hall & Barduhn, 2016).

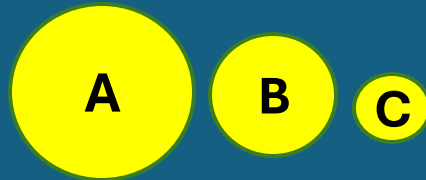


Functions

WHEN TO USE?

Used to talk about extremes.(Azhar, 2003; Hall & Barduhn, 2016), e.g.

- Circle A, B, and C.



- Reputation of businesses.



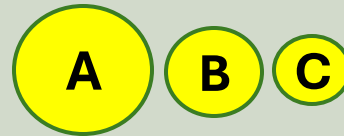
- A group of students



Formula

HOW TO USE?

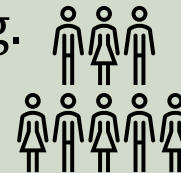
- Adjectives + est + than (for most 1-syllable adjectives), e.g.
Circle C is the **smallest**.



- Most/ least+ adjectives (for most 2-syllable adjectives), e.g.
Company A is **the most famous**.



- When the adjective ends in -i sound, you add +est, e.g.
Student X is **friendliest**.



- Most/ least + adjectives (for long adjectives), e.g.
Company B is **the most successful** company.



Formula

HOW TO USE?

There are different rules for forming superlatives depending on the ending of the simple form of the adjective.

- If the adjective ends in “-e,” just an “-st” is added.

close → closest

- For some adjectives ending in “-y,” the “-y” is removed and “-iest” added.

early → earliest

- For single-syllable adjectives ending consonant-vowel- consonant, the final letter is doubled and “-est” added.

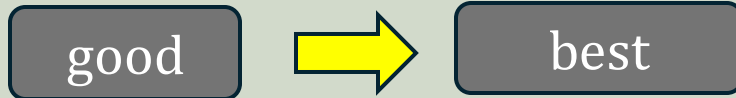
big → biggest

Formula

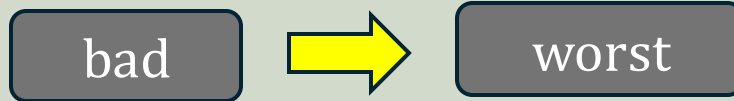
HOW TO USE?

Some common adjectives have irregular superlatives.

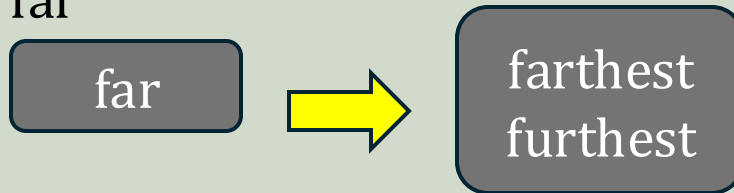
- good



- bad



- far



Tips and examples

Student	Grade
Umbu	8.0
Rambu	9.0
Jack	7.0
Rose	7.0
Dorus	8.0
Bunga	8.5
Lily	7.5
Lilo	7.0

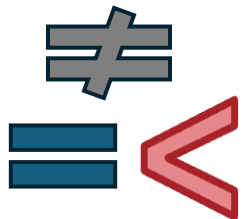
You are given a set of data on the students' final grade in a Math class, then asked to make superlative sentences.

- What attribute(s) would you like to compare?
GRADE.
- What adjective(s) can you use to compare the attribute? **HIGH, LOW**
- How many syllables are HIGH/LOW? 1 syllable. So, you need to add -est after the adjectives.

Therefore, your superlatives can be as follow:Rambu has the **highest** score.

Equatives

Equatives adjectives, or frequently refer to “as ... as comparisons” can be used to discuss degrees of similarity and difference. They can be modified with adverbs to make them stronger or weaker (Azhar, 2003; Hall & Barduhn, 2016).



Functions & Formula

- Used to talk about Equatives are used when things are equal.
- To form equatives:

as + adjective + as

- Examples:



Dorus
162 cm; 50 kg



Umbu
184 cm; 60 kg



Vito
150 cm; 45 kg



Rambu
184 cm; 50 kg

Your equative:

Rambu is **as tall as** Umbu.

Tips and examples

Business Name	Rate/ hour
Oke Math	IDR 200.000
Best Tutoring	IDR 150.000
Pasti Lulus	IDR 175.000
Best Math	IDR 200.000

You are given a set of data on the rates of some tutoring businesses in town , then asked to make "as ... as comparison",

- What attribute(s) would you like to compare? **RATES.**
- What adjective(s) can you use to compare the attribute? **HIGH, LOW**

Therefore, your superlatives can be as follow:

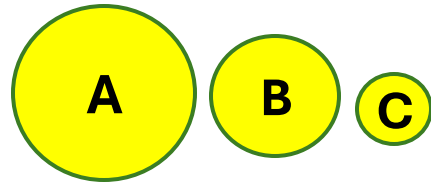
The hourly rate at Oke Math is **as high as** the hourly rate at Best Math.

Common Mistakes

01

When forming comparatives, it is incorrect to add “more” before the adjective if it already has a comparative ending.

“bigger” is correct, but “more bigger” is not.



1) Circle B is more bigger than Circle C.

02

When forming superlatives, it is incorrect to add “most” before the adjective if it already has a superlative ending.

“biggest” is already a superlative adjective so “most” is unnecessary.

2) Circle B is the most biggest.



Displaying Data

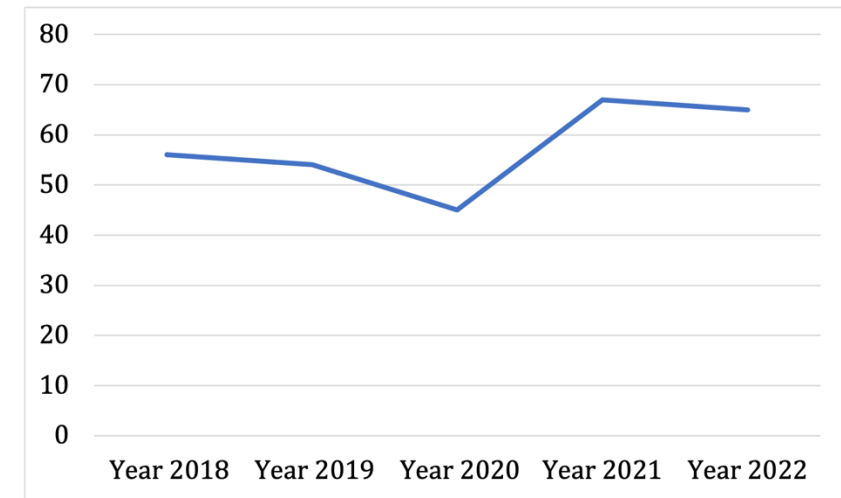
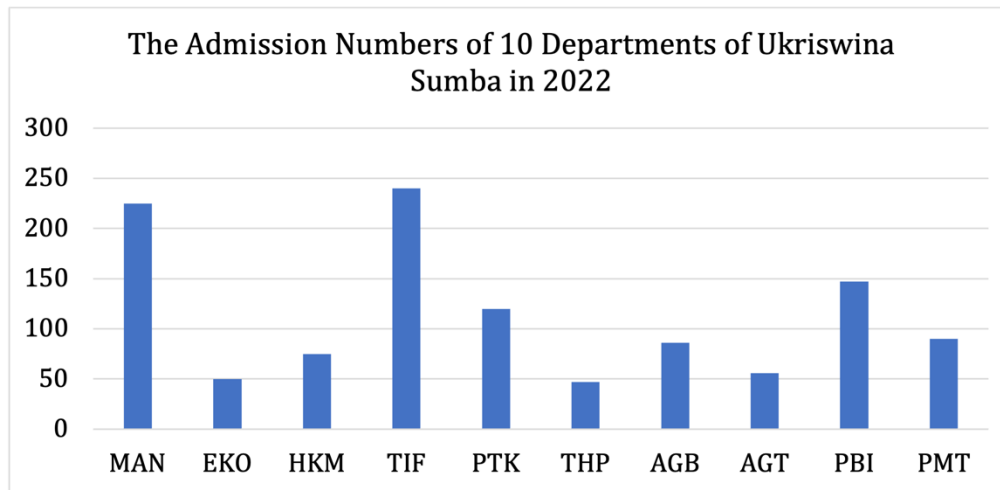
Displaying Data Comparisons

- The common method of displaying data is using tables.
- A **table** is a convenient way to show large amount of data in a small space
- Other than tables, you can display your comparisons not only in text, but in a more attractive way!
- Use visually attractive form, such as charts/ diagram.

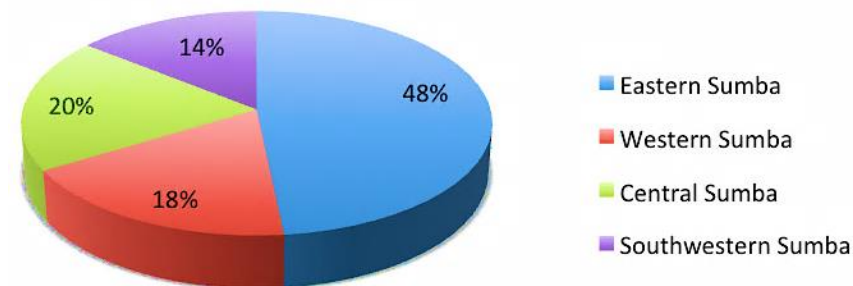
Business Name	Rate/ hour
Oke Math	IDR 200.000
Best Tutoring	IDR 150.000
Pasti Lulus	IDR 175.000
Best Math	IDR 200.000

Types of Chart

- A (vertical or horizontal) **bar chart** is used to compare *unlike* (*different*) items
- A **line chart** depicts changes over a period of time, showing data and trends



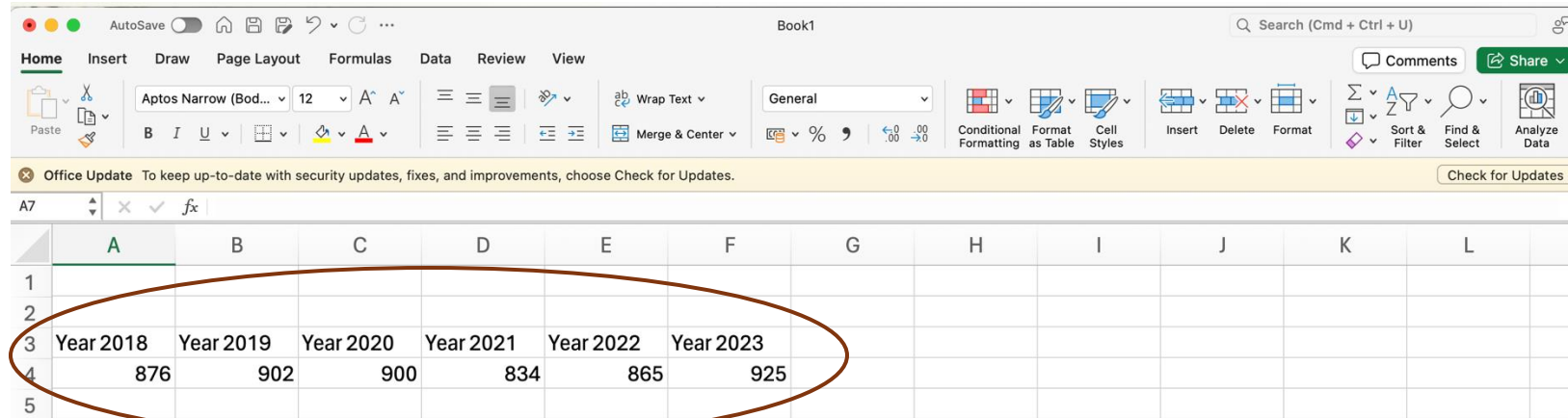
- A **pie chart** displays the *size* of each part as a percentage of a *whole*.



How to Create Charts?

You can use Microsoft Excel to create charts.

1. In Excel, input your data.



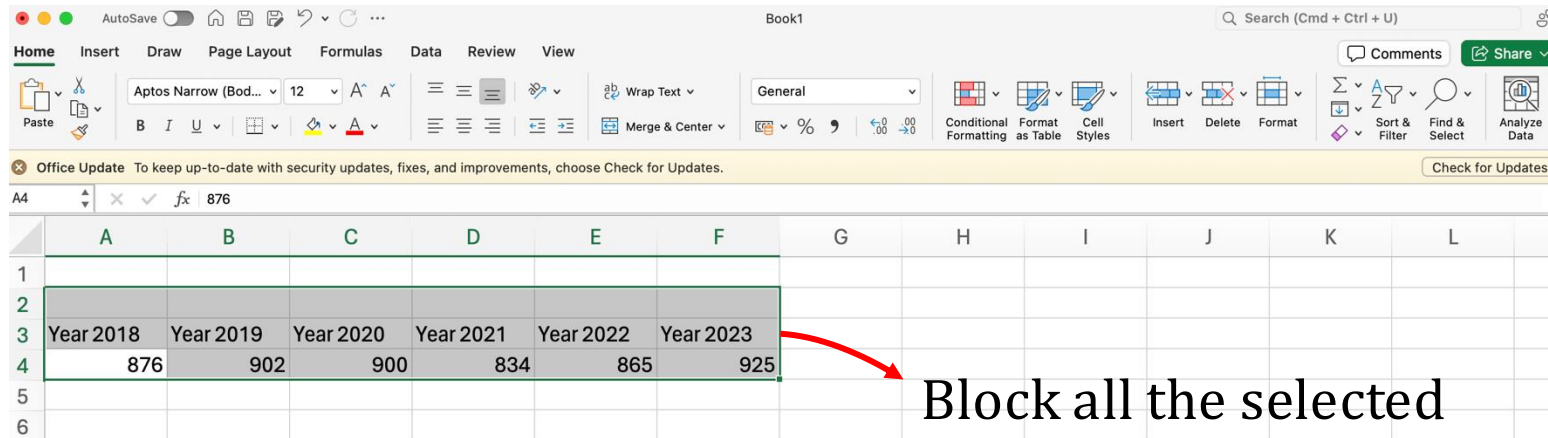
The screenshot shows the Microsoft Excel interface with the following data entered:

	A	B	C	D	E	F	G	H	I	J	K	L
1												
2												
3	Year 2018	Year 2019	Year 2020	Year 2021	Year 2022	Year 2023						
4	876	902	900	834	865	925						
5												

your data.

How to Create Charts?

2. Select your data



The screenshot shows the Microsoft Excel interface with the following data table selected:

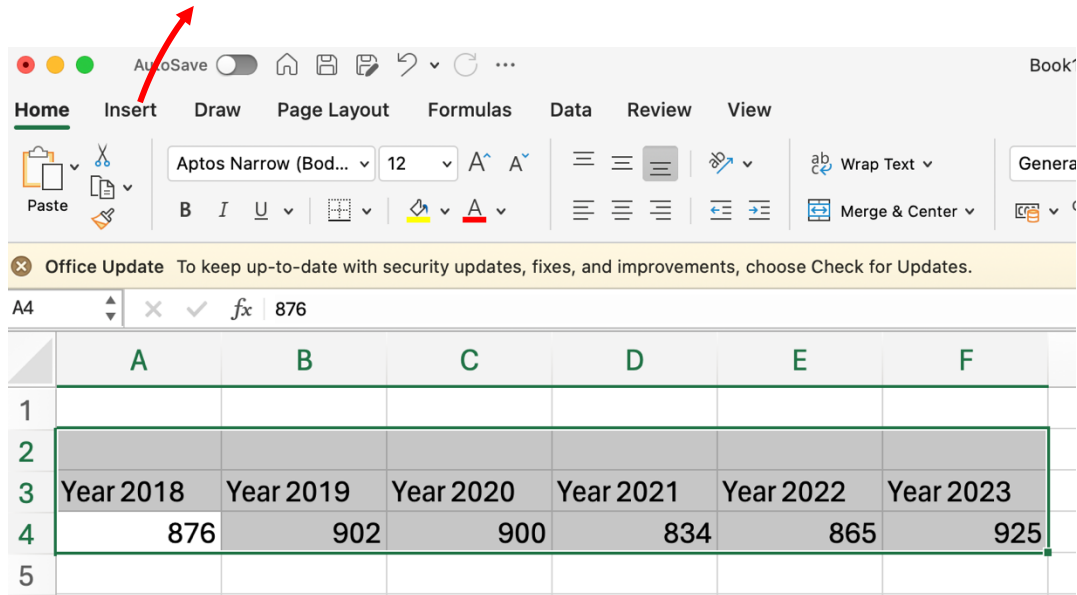
	A	B	C	D	E	F	G	H	I	J	K	L
1												
2												
3	Year 2018	Year 2019	Year 2020	Year 2021	Year 2022	Year 2023						
4	876	902	900	834	865	925						
5												
6												

A red arrow points from the text "Block all the selected columns and rows containing your data" to the selected data range in the table.

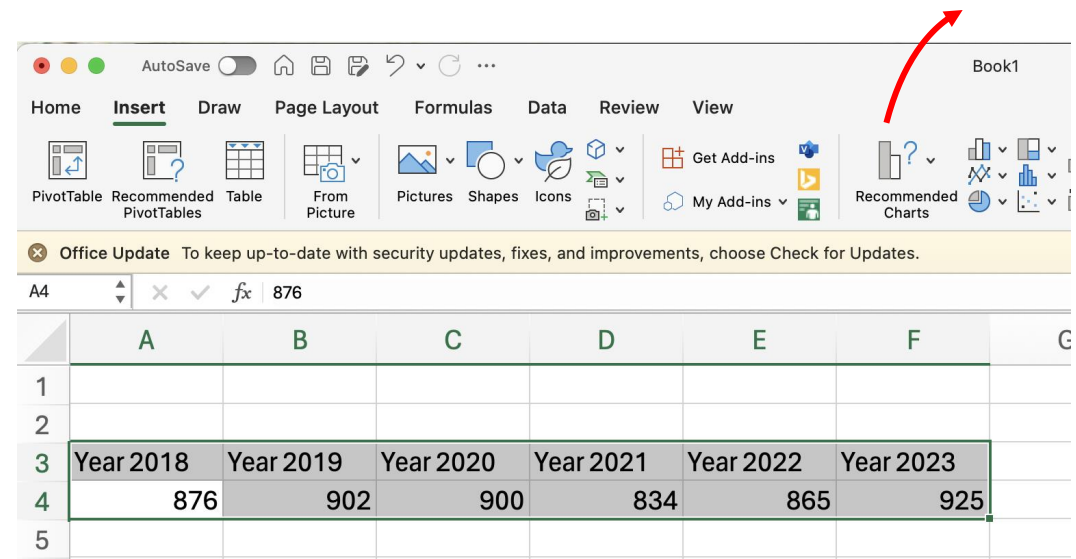
Block all the selected columns and rows containing your data

How to Create Charts?

3. Click Insert Tab



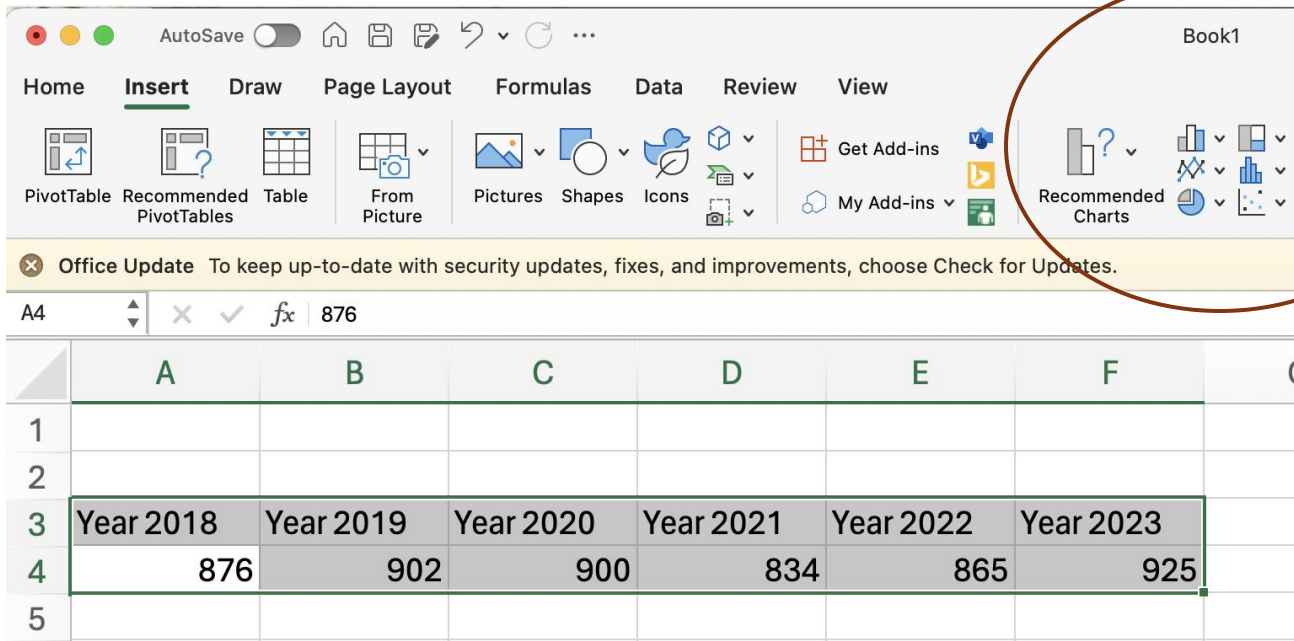
4. Click recommended charts



Note: You can choose from one of the recommended charts. However, if you'd like to make your own, see step no. 5

How to Create Charts?

5. Click one of these tabs



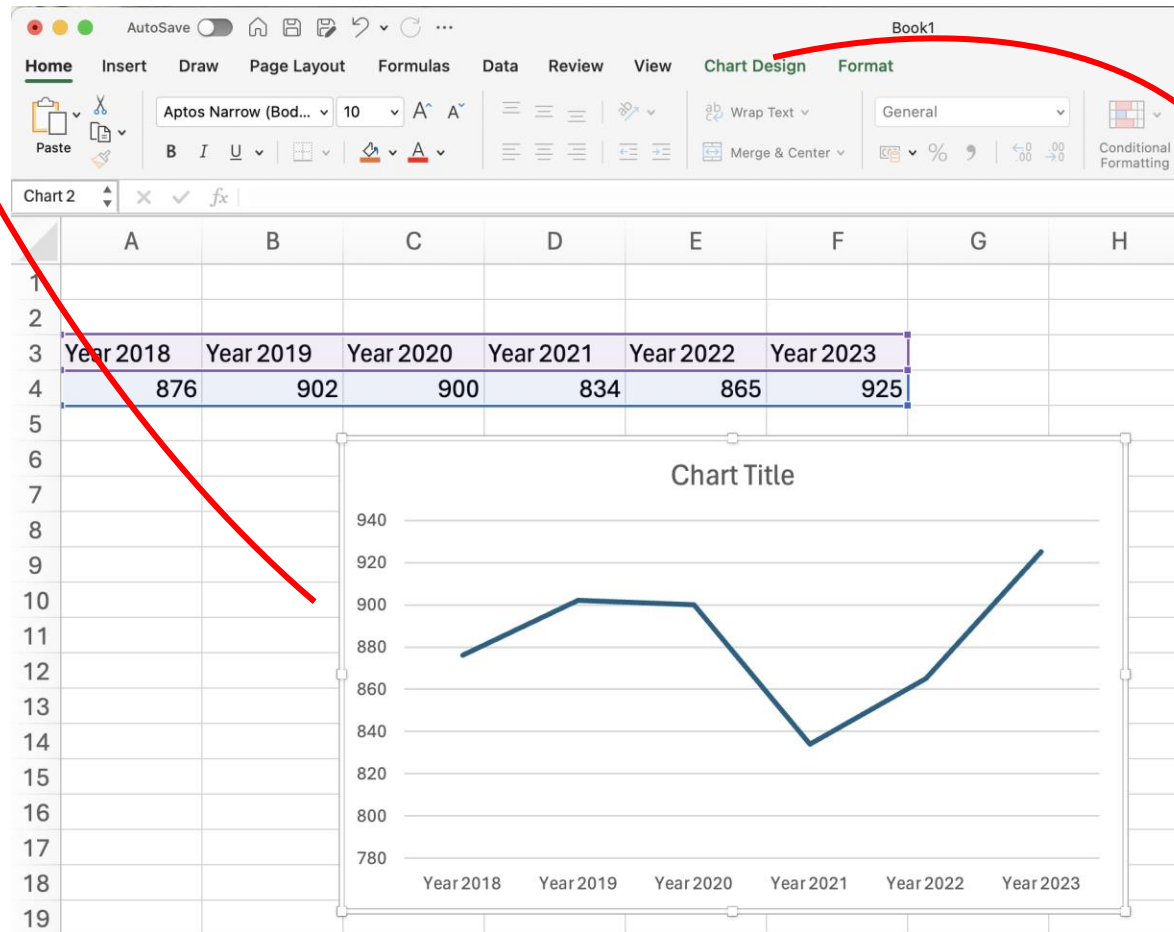
The screenshot shows the Microsoft Excel interface. The 'Insert' tab is selected on the ribbon. The 'Recommended Charts' group is highlighted with a red circle, and a red arrow points from it to the text 'You can select one of these chart icons.' Below the ribbon, the 'Office Update' notification bar is visible. The spreadsheet area shows a table with the following data:

	A	B	C	D	E	F	G
1							
2							
3	Year 2018	Year 2019	Year 2020	Year 2021	Year 2022	Year 2023	
4	876	902	900	834	865	925	
5							

You can select one of these chart icons.

How to Create Charts?

6. Your chart is ready!

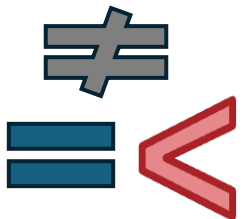


Notes:

Click the “Chart Design” tab to modify your chart.

Take Home Notes

- To make comparisons using English, think of:
 - 1) What attribute(s)/ feature(s) of the objects can we compare?
 - 2) What adjective(s) can we use to compare the attributes/ features?
- There are three ways of making comparisons:
 - 1) Comparative
 - 2) Superlative
 - 3) Equative

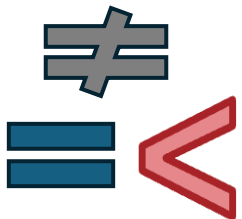


Summary

	Comparatives	Superlatives	Equatives
Function	Comparatives express <u>similarities or differences</u> between two things.	Superlatives express <u>extremes among</u> things.	Equatives are used when things are <u>equal</u> .
Formula	<ul style="list-style-type: none"> adjectives + er + than (for most 1 syllable) More/ less than + adjectives (for most two syllables) and long syllable When the adjective ends in -i sound, add +er 	<ul style="list-style-type: none"> adjectives + est (for most 1 syllable) Most/ least + adjectives (for most two syllables) and long syllable When the adjective ends in -i sound, add +est 	as + adjective + as
Examples	<ul style="list-style-type: none"> 5 is larger than 2. School A has more students than school B. 	Among 1 ; 2 ; 3 ; 4 ; and 5, 5 is the largest .	Your heart is as large as your fist.

Take Home Notes

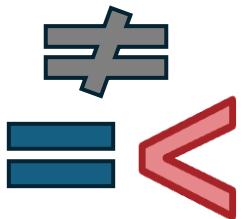
- To display data, you can use:
 - 1) tables as a convenient way to show large amount of data in a small space
 - 2) A **bar chart** is used to compare *unlike* (*different*) items
 - 3) A **line chart** depicts changes over a period of time, showing data and trends
 - 4) A **pie chart** displays the *size* of each part as a percentage of a *whole*.



Task

“Which One is Better?”

- **Work with a group of 4.**
- Choose **two different classroom layouts** (e.g., traditional row seating vs. group seating, a small vs. large classroom).
- **Compare** them using at least **5 comparative or superlative sentences** (e.g., “Group seating is more interactive than row seating. A smaller classroom is quieter than a larger one.”).
- Report your comparisons in a **simple slide with images.**

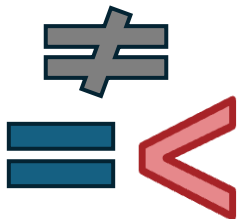


References

Azar, B. S., & Hagen, S. A. (2009). *Understanding and Using. English Grammar* (4th ed.). Pearson Education.

Grechina, O., & Mironova, E. (1974). *English for Students of Mathematics*. Издательство «Высшая школа».

Hall, D. and Barduhn, S. (2016). *English for Everyone*. Edited by J. Siklos and A. Singer. New York: DK Publishing.



Thank you and see you in Lecture 4!

