

LAB PROJECT

Line Graph and Bar Graph

Total Marks: 20

Deadline: November 29, 2022

Note: Below are the themes that are assigned to the groups and they have to work on their designated themes only. Make graphs (both line and bar) by using the details provided, answer the given questions, and write the description by following the criteria. (See the chapter on page # 122)

Bring the PPTs for the Presentation and submit the printed file in the classroom.

Group 1 & Group 8:

A survey of students' favorite after-school activities was conducted at a university. The table below shows the results of this survey.

Students' Favorite After-School Activities		
Activity	Number of Male Students	Number of Female Students
Play Sports	37	19
Talk on Phone	43	58
Visit With Friends	93	49
Earn Money	44	31
Chat Online	86	91
Mobile Games	22	21
Watch TV	37	78

QUESTION

1. What is the title of this graph?
2. What is the range of values on the (vertical) scale?
3. How many categories are in the graph?
4. Which after-school activity do students like most in total?
5. Which after-school activity do students like least in total?
6. How many students like to talk on the phone in total?
7. How many male students like to earn money?
8. How many female students like to play sports?
9. Which two activities are liked almost equally by both male and female students?

Group 2 & Group 4:

The amount of sugar and the amount of protein in 7 different food items was measured in percentage. The data is summarized below.

Amount of Sugar and Protein in Certain Foods		
Food Items	Amount of Sugar	Amount of Protein
Ketchup	18.5	9.7
Peanut Butter	26.8	38.4
Chocolate	58.6	66
Ice Cream	52.3	26.5
Cookies	33	61.8
Jelly	22.2	33.1

QUESTION

1. What is the title of this graph?
2. What is the range of values on the (vertical) scale?
3. How many categories are in the graph?
4. Which food had the highest percentage of sugar?
5. Which food had the second lowest percentage of sugar?
6. Which food had the highest percentage of protein?
7. Which food had the lowest percentage of protein?
8. What is the difference in the percentage of protein between ketchup and cookies?
9. What is the difference in the percentage of sugar between ice cream and peanut butter?

Group 5 & Group 7:

The performance of three students in each course in a semester was measured in CGPA. The data is summarized below.

Performance of Students in Different Courses in a Semester			
Courses	CGPA of Student A	CGPA of Student B	CGPA of Student C
Programming Fundamental	2.9	3.0	2.3
Islamic Studies	3.7	3.3	3.2
English Composition & Comprehension	3.2	3.6	3.4
Physics	2.8	3.4	3.1
Calculus	3.5	2.6	3.2
Pakistan Studies	3.8	3.1	3.4

QUESTION

1. What is the title of this graph?
2. What is the range of values on the (vertical) scale?
3. How many categories are in the graph?
4. In which course, student A had achieved second highest score?
5. In which course, student C needs to work hard?
6. In which two courses, student B is having almost equal CGPA?
7. What can be the average total CGPA of all the three students in a semester?
8. In how many courses, all the three students are having almost same CGPA?

Group 3 & Group 6:

Given is the data of the total sale of cars in last 5 years by the four top car companies in Pakistan.

Cars Sold in the last 5 Years					
Car Brands	Unit Sold in 2016	Unit Sold in 2017	Unit Sold in 2018	Unit Sold in 2019	Unit Sold in 2020
Toyota	5600	5940	5360	6100	6750
Suzuki	7950	8090	7720	6550	5700
Kia	2900	3150	3280	4800	6260
Honda	4850	5200	5490	5240	5780

QUESTION

1. What is the title of this graph?
2. What is the range of values on the (vertical) scale?
3. How many categories are in the graph?
4. Which car brand has sold more units in total?
5. Which car brand has sold the least number of units in total?
6. In which year, the most number of units has been sold in total?
7. Which two car brands are having an equal number of units sold in 2018?
8. In a total of 5 years, how many units have been sold by Toyota Company?