1. How many distinct students are there in the class?

Answer: 41

Formula : COUNTA (UNIQUE (A2:A115))

Explanation:
The above formula will return the count of all distinct items from the list in **A2:A115**.
The **UNIQUE** function returns all the distinct values from the list. The number of items in the distinct list is then counted using the **COUNTA** function.
Reference

2. How many unique student entries are there in the dataset?

Answer: 4

Formula: COUNTA (UNIQUE (A2:A115, FALSE, TRUE))

Explanation:
The above formula will count the unique items in the range **A2:A115**.
The **UNIQUE** function returns the list of unique values.
This version of the **UNIQUE** function uses the second and third optional arguments which are set to **FALSE** and **TRUE** respectively.
The second argument is set to **FALSE** and tells the **UNIQUE** function to return the unique rows from the array input.
The third argument is set to **TRUE** and tells the **UNIQUE** function to return items from the input array that appear exactly once.
The **COUNTA** function is then used to count the number of items returned from the **UNIQUE** function.
Reference

3. What is the min and maximum mark scored in each subject?

Answer:

		Min	Max
1	English	26	99
2	Math	23	100
3	Science	20	100

Formula:

MINIFS (Marks [Marks], Marks [Subject], F7)

MAXIFS (Marks [Marks], Marks [Subject], F7)

Explanation:
Minifs finds minimum value in the range given by Marks [Marks], based on the criteria, Marks [Subject] = value in F7. Here, F7 refers to the cell with a subject value.

4. How many students scored a centum?

Answer:

	Subject	Number of students
1	English	0
2	Math	1
3	Science	2

Formula:
COUNTIFS (Marks [Marks],100, Marks [Subject], F12)

Explanation:
COUNTIFS can take multiple criteria and count values based on them
Here, criteria1: Marks = 100,
criteria2 : refers to respective subject in cell F12

5. How many students failed in all three subjects (The pass mark is 50)?

Answer: 3

Name	All subjects fail
Ahmed Khan	Yes
Emily Chen	Yes
Kavya Reddy	Yes

Formula:
Added the table to Data model and created the following measures

```
Failed count = CALCULATE (COUNT (Table4 [Name]), Table4 [Marks] <50)
        (or) = COUNTX (Table4, if (Table4 [Marks]<50,1))
All subjects fail = if ([Failed count]=3, "Yes")
```

Explanation:
1. Calculate count counts the no of names who has marks <50.
- While adding this measure in pivot table with filter context of name, It gives the count of subjects the students have failed.
2. 'All subjects fail' returns "Yes" only if students have a failed[count] of 3, i.e., failed in all 3 subjects.

6. In which subject do most of the students fail?

Answer: Math

Subject	Failed count
English	14
Math	20
Science	17

Formula & Explanation:
Same as above

7. Who scored the highest total mark in the class?

Answer: Abdul Khan

Explanation:
Used Pivot table to calculate the total marks for each student and Conditional Formatting to find the highest marks.

Name/subject	English	Math	Science	Grand Total
Abdul Khan	66	92	100	258
Adam	Absent	84	Absent	84
Ahmed	42	23	59	124
Ahmed Khan	45	28	48	121
Amy Wong	33	28	63	124
Anna Lee	88	42	70	200
Ashley	57	70	36	163
Ben	52	67	43	162
Cara	Absent	49	36	85
Carlos Ortiz	26	45	71	142
Dan	51	45	70	166
David	31	50	60	141
David Kim	68	100	84	252
Emily	85	53	52	190
Emily Chen	44	39	25	108
Fatima Ali	58	43	45	146
Fiona	55	26	68	149
Greg	Absent	80	Absent	80

Hannah	32	59	56	147
Ishaan	37	75	88	200
Jay Patel	50	70	51	171
Jessica	75	46	73	194
John	85	44	22	151
John Smith	69	29	62	160
Karen	61	49	20	130
Kavya Reddy	46	41	36	123
Lara Chen	48	27	68	143
Maria	85	87	26	198
Maria Lee	75	44	45	164
Miguel Ramos	71	43	43	157
Mohammad	99	51	77	227
Mohammad Ali	42	74	61	177
Naveen Kumar	Absent	93	Absent	93
Priya	39	55	49	143
Priya Patel	35	93	46	174
Raj	Absent	37	Absent	37
Raj Singh	81	43	27	151
Sarah	80	98	40	218
Sean Kim	64	52	100	216
Sophie	72	75	95	242
Sophie Wu	27	58	35	120

8. Who scored the lowest total marks?

Answer: Raj

Explanation:
Used Pivot table to calculate the total marks for each student and Conditional Formatting to find the lowest marks. (see table above).

9. Who scored top marks in each subject and their mark?

		Name	Marks
1	English	Mohammed	99
2	Math	David Kim	100
3	Science	Abdul Khan	100
		Sean Kim	100

Explanation:

Used Pivot table and Conditional Formatting to highlight the highest marks of each subject.

Name	English	Math	Science
Abdul Khan	66	92	100
Adam	Absent	84	Absent
Ahmed	42	23	59
Ahmed Khan	45	28	48
Amy Wong	33	28	63
Anna Lee	88	42	70
Ashley	57	70	36
Ben	52	67	43
Cara	Absent	49	36
Carlos Ortiz	26	45	71
Dan	51	45	70
David	31	50	60
David Kim	68	100	84
Emily	85	53	52
Emily Chen	44	39	25
Fatima Ali	58	43	45
Fiona	55	26	68
Greg	Absent	80	Absent
Hannah	32	59	56
Ishaan	37	75	88
Jay Patel	50	70	51
Jessica	75	46	73
John	85	44	22
John Smith	69	29	62
Karen	61	49	20
Kavya Reddy	46	41	36
Lara Chen	48	27	68
Maria	85	87	26
Maria Lee	75	44	45
Miguel Ramos	71	43	43
Mohammad	99	51	77
Mohammad Ali	42	74	61
Naveen Kumar	Absent	93	Absent
Priya	39	55	49
Priya Patel	35	93	46
Raj	Absent	37	Absent
Raj Singh	81	43	27
Sarah	80	98	40
Sean Kim	64	52	100
Sophie	72	75	95
Sophie Wu	27	58	35

10. How many students in the class have the possibility to pass a math subject, if the minimum passing marks are set at 45 or above?

Answer: 5

Formula:
COUNTIFS (Marks[Marks], "<50", Marks[Marks], ">=45", Marks[Subject],"Math")

Explanation:
COUNTIFS can take multiple criteria and count values based on them
Here, criteria1: Marks <50,
Criteria 2: Marks >=45,
Criteria 3 : Subject = Math

Reference