

33. Summarizing Data

a) Demo · Summarizing Data

Range	From minimum to maximum
Mean	$\text{Sum} \div \text{Count}$
Median	Middle value when sorted
Mode	Most frequent value

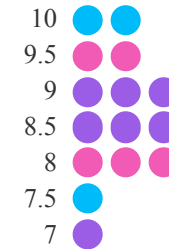
Daily sleep time of 15 students (hours):

7, 7.5, 8, 8, 8, 8.5, 8.5, 8.5, 9, 9, 9, 9.5, 9.5, 10, 10

- Range: from 7 to 10, span of 3 hours
- Mean ≈ 8.6 hours
- Median = 8th value = 8.5 hours
- Mode = 8, 8.5, 9 (each appears 3 times)

Conclusion: Most students sleep 8~9 hours

Sleep Time Dot Plot



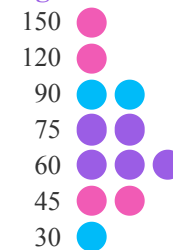
b) Practice Summarizing Data

Daily phone usage of 12 students (minutes):

30, 45, 45, 60, 60, 60, 75, 75, 90, 90, 120, 150

- ① Minimum = Maximum =
- ② Range: from to
- ③ Mean $\approx$
- ④ Median =
- ⑤ Mode =

Phone Usage Dot Plot



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c) Describing Distribution Shapes

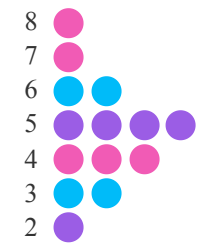
Observe the three dot plots and describe their characteristics:

① Shape of Set A:

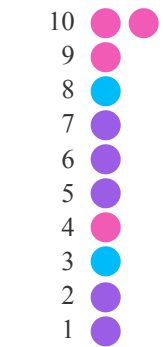
② Shape of Set B:

③ Shape of Set C:

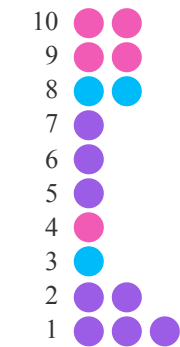
Set A



Set B



Set C



d) Real-World Interpretation

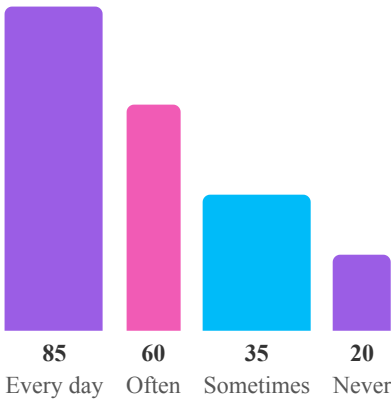
The bar chart shows **daily breakfast habits** of 200 students:

① What describes most students' breakfast habits?

② What are the characteristics of this distribution?

③ Based on the data, what could the school do to improve?

Breakfast Habits Bar Chart



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e) Comparing Two Datasets

Math scores of 12 students from Class 3 and Class 4:

Class 3: 65,70,72,75,78,80,82,85,88,90,92,95

Class 4: 50,55,60,65,70,75,80,85,90,95,98,100

① Mean of Class 3 $\approx$

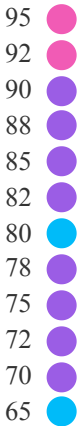
Mean of Class 4 $\approx$

② Range of Class 3 =

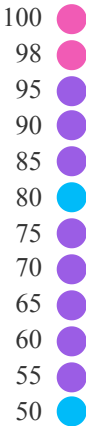
Range of Class 4 =

③ Which class has more concentrated scores?

Class 3



Class 4



f) Writing a Data Summary

Weekly exercise time of 10 students (minutes):

90, 120, 120, 150, 150, 150, 180, 180, 210, 300

① Range: from to

② Mean $\approx$

③ Median =

④ Mode =

⑤ Any outliers?

⑥ Write a paragraph summarizing exercise time:

Exercise Time Dot Plot

