Interpreting bar graphs & histograms

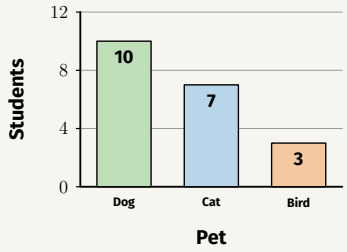
Read the scale carefully before you calculate.

Name _____ **Date** _____

Reading bar graphs and histograms

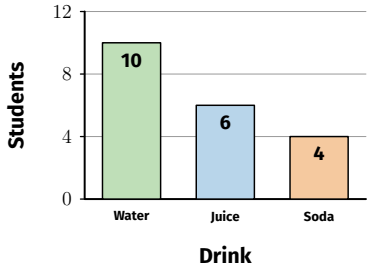
A bar graph has gaps between bars for separate categories; a histogram's bars touch because the horizontal axis is a continuous scale grouped into equal intervals. Read a bar's height straight off the vertical scale.

Worked example This bar graph shows favourite pets. How many more students own a dog than a bird?



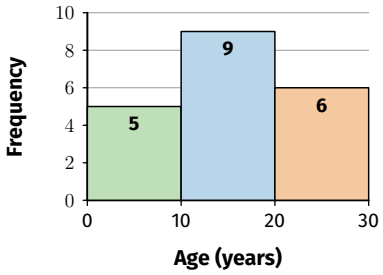
Dog $= 10$, Bird $= 3$.
$10 - 3 = 7$ more students.

1. Which drink is the least popular?



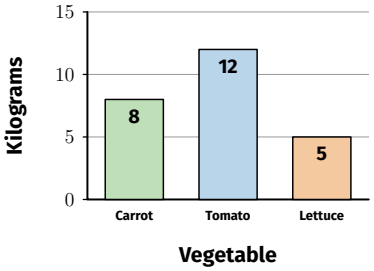
Working

2. How many people are aged 10–20?



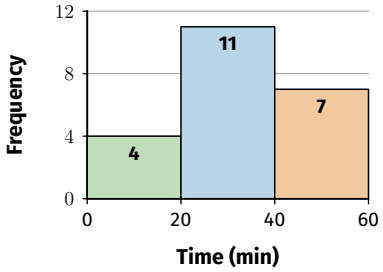
Working

3. How many Tomatoes and Lettuces were grown altogether?



Working

4. How many students sat the exam in total?



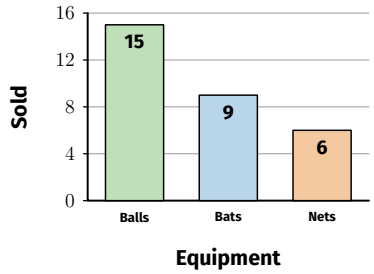
Working

Interpreting bar graphs & histograms (continued)

The tallest bar shows the mode or modal class.

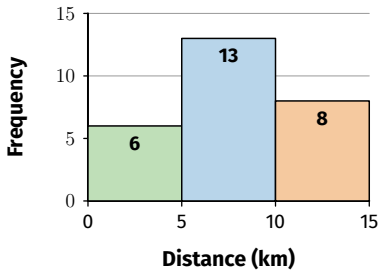
Name _____ **Date** _____

5. How many more balls were sold than nets?



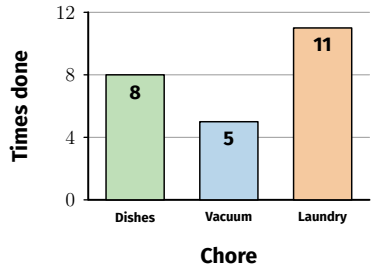
Working

6. What is the modal class for commute distance?



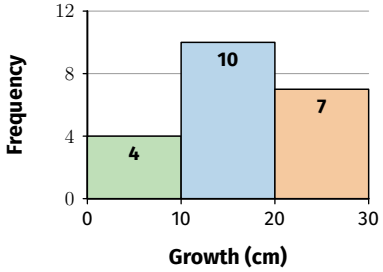
Working

7. Which chore is the mode?



Working

8. How many plants grew less than 20 cm?



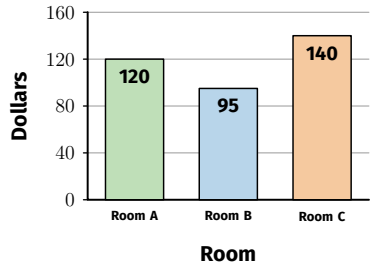
Working

Interpreting bar graphs & histograms (continued)

Combine reading the chart with a second calculation step.

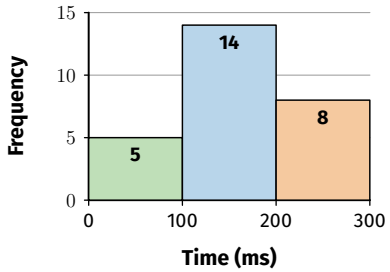
Name _____ **Date** _____

9. How much did Room A and Room C raise together?



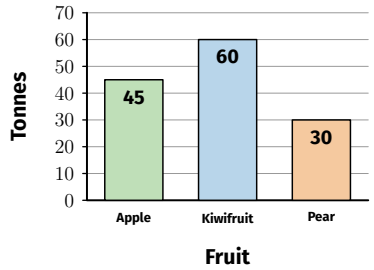
Working

10. How many reacted in under 200 ms?



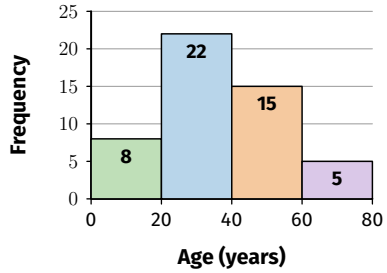
Working

11. How many more tonnes of Kiwifruit than Pear were exported?



Working

12. Which age interval has the highest frequency?



Working

Interpreting bar graphs & histograms (continued)

A weighted average, cumulative frequency, and frequency density all need care.

Name _____ **Date** _____

13. Class A (20 students) averaged 58%. Class B (15 students) averaged 72%. Find the combined average.

14. A cumulative frequency table: Value $< 10 = 5$, $< 20 = 14$, $< 30 = 23$, $< 40 = 30$. How many values lie between 20 and 30?

15. A histogram has classes 0–10 (frequency 9) and 10–25 (frequency 12). Which class has the higher frequency density?